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THE

FLORICULTURAL CABINET,

AND

FLORISTS' MAGAZINE.

JANUARY TO DECEMBER, 1847.

VOLUME XV.

BIBLIOTHECA · BODLEIANA

CONDUCTED BY

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PREFACE.

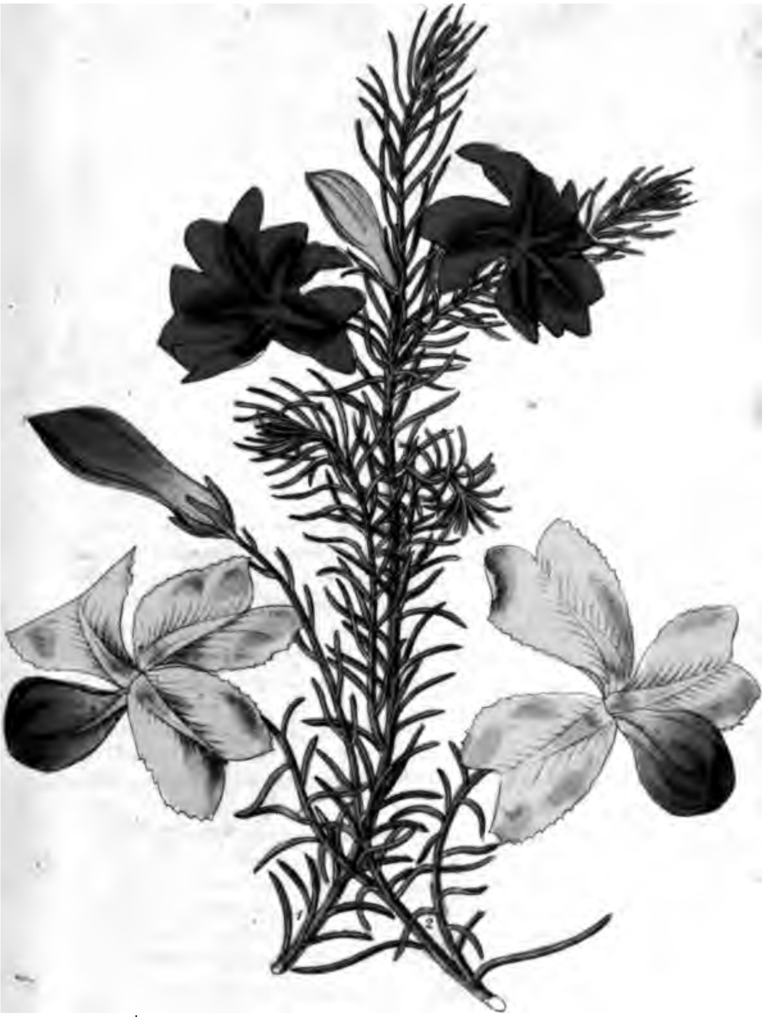
The rapid flight of time now proclaims to us that another year is closing, and that it is by the good providence of our Creator that we are permitted to arrive at the period when our last number of the fifteenth volume of the FLORICULTURAL CABINET is completed, and the annual Preface to it is to be presented to our readers. In many respects this is a pleasing duty, as we have to offer, as we now do, our very sincere thanks both to the subscribers for their kind patronage, and who, by calling for our successive labours, encourage us in prosecuting them, and to our correspondents, whose very valuable assistance has so much contributed to the interest and value of the Magazine, and thereby enabled us to offer to the public another volume, being the first of the THIRD SERIES, which we think is not unworthy of the two previous ones, but, in the selection of the newest and most handsome flowers figured, the manner of their execution, subjects introduced and treated upon, as well as the arrangement of the whole, places it in a more elevated position than they.

The successive numbers that form the volume to which this Preface is to be affixed have undergone the examination of our readers, and either been approved or otherwise, according to the varied views and tastes of the individuals. For an Editor to praise what he has done is not consistent with modesty, and publicly to censure what he has done, even if he thinks his labours defective, is scarcely to be expected in the present state of human nature. All that we feel disposed to say respecting the contents of the present volume is, that in preparation it has been our earnest and ceaseless desire, as much as possible, and as far as real ability would admit, to meet the wish of every class of our readers. It is gratifying to us to have to state that not a single complaint has been made to us through the year, but numerous assurances to the improvements effected have been sent from persons whose opinions are entitled to the highest deference. The volume is concluded as those which preceded it have done, as we intend any future ones to do, and must speak for itself; we shall, therefore, leave it to explain and establish its own merit.

Nature is the general name adopted for all earthly things which are not the result of human labour and contrivance; the works of Nature, therefore, abound in almost endless variety, and the science of botany may be considered to be the knowledge of Nature in her vegetable department. In this vast and most interesting field there is ample range for the employment and improvement of every intellect. We shall attempt, in future, to direct the attention of our readers to this instructive and truly delightful subject; and our most zealous efforts shall be employed to advance the art of Floriculture, as well as the science of whatever is connected therewith. To accomplish this, we again most respectfully solicit the assistance of our friends, and we feel assured, having that, the results will be approved. We very respectfully acknowledge our obligations to them, and, in confidence of having future aid, we shall begin anew to evince our gratitude.

To ourselves, Floriculture has a peculiar charm; its practical results are not only delightful to the eye, but exhilirate the finer feelings, expand the mind, and as every flower has a voice with which mankind may hold delightful and beneficial converse, we are anxious that others, with us, should derive the felicity they are designed to afford, tending, too, to raise the mind from the immensity and beauty of what this earth affords, to those brighter regions where the flowers never wither, droop, or die.

Downham, November 21, 1846.



1. Leschenaultia splendens. 2. Leschenaultia arcuata.

FLORICULTURAL CABINET

JANUARY, 1847.

ILLUSTRATIONS.

THE charming genus to which the plants belong that we have now the pleasure to figure is universally admired by all lovers of flowers. It is twenty-two years since the introduction of the first species, *Leschenaultia formosum*, which on its first display of rich flowers was most deservedly applauded; and although there have been during that period an innumerable quantity of new plants of a similar class introduced into this country, it has each year increased as an object of admiration, and the plant, laden with its profusion of rich deep scarlet flowers, is yet one of the neatest ornaments of the greenhouse. The *L. oblata* was introduced the following year, a similar shrub, the flowers of which are of an orange red colour. In 1839, some handsome species were sent from the Swan River colony, including *L. biloba*, the very lovely, large, blue flowered, of erect habit, and a free bloomer; *L. laricina*, the Larch-leaved, a neat dwarfish plant, the flowers of which are of a violet-purple colour; *L. glauca*, a similar variety, but the flowers are in colour a mixture of red and yellow. All the above species are handsome, but those which form the subjects of our illustrations in the present number very much excel them. Mr. James Drummond discovered

LESCHENAULTIA SPLENDENS—The splendid Leschenaultia,

In the Swan River colony, and transmitted some of its seeds to Messrs. Lucombe, Pince, and Co., nurserymen of Exeter, who have succeeded in raising plants, which have bloomed beautifully the past season. In its native situation it forms a bushy shrub, growing about two feet high.' It is supposed that this is the species which Mr. Drummond, in describing, states its flowers vary much in colour, "having blood-red, rose, white, pink, scarlet, lilac, and purple, of the same species on *different* plants." There is much gracefulness in the growth of the plant, and being naturally liberally furnished with branches it soon becomes a handsome bush; and when its copious profusion of brilliant flowers are in full display at once, and continue for a long period, few plants of its size can vie with it in brilliancy:—such it appeared to us.

LESCHENAULTIA ARCUATA—THE DROOPING LESCHENAULTIA,

Was also raised by Messrs. Lucombe, Pince, and Co. from seed sent by Mr. Drummond from the Swan River colony, and bloomed profusely in the greenhouse during last summer. It is a dwarfish, prostrate, half-shrubby, branching plant, the shoots bending downwards. It is a free bloomer, and when a number of its large flowers are in display forms a deserving companion to *L. splendens.*

The skill of the culturist has of late effected much improvement in the growth of Leschenaultias. But a few years since plants a foot high, and the same in breadth, were considered wonderful specimens; now, however, our floral exhibitions are graced with them thrice that size.

In order to insure successful growth it is necessary to remark that all newly obtained soils from the pasture or heath must not be used, because, in such a state, they are too acrid, or, as it is termed, *raw*, for the delicacy of the plant. The materials for compost ought to be well incorporated together for at least six months previous to using, by its being turned over and chopped two or three times during the period. In the following kind of compost the plant grows in a vigorous and healthy state, and is that usually employed by the best exhibitors at the metropolitan shows. Equal portions of rough turfy sandy peat, and rich light turfy loam; to which is added a quarter of leaf mould, and a quarter of silver sand, pieces of charcoal, broken pot, stones, &c. These are by turning over, as before stated, well mixed together. In a compost of this kind, and by the following treatment, four species were grown to a state of perfection we have not seen surpassed.

In March, 1843, four healthy plants, each of a different species, which were growing in 32-sized pots, were obtained, and re-potted into 24's, having an inch and a half, or two inches deep of broken pots for drainage, over which some pieces of chopped sod were laid, and then filled up with the compost above described, care being taken to keep the crown of the roots as high as the rim of the pot, so that the water might drain slightly away from the stem, which is very susceptible of injury where an excess of wet is allowed to remain, and this it is that has often occasioned the sudden death of a plant. After potting, the plants were placed in a light and airy part of the greenhouse, judicious attention to watering being always given—a point in their culture requiring care, to vary the supply according to the necessities of the plant; in its growing condition it must not be allowed to droop for want, but when the season of rest comes only as much water as will keep the soil *moist*, not *wet*, should be applied. Another very necessary requisite is to have the plants in a light situation, near to the glass, and where a liberal portion of air is admitted. About the middle of July the pots being filled with roots, the plants were again re-potted, keeping the balls entire; they were retained in the greenhouse until the end of August, when they were removed to a sheltered situation for a month, in order to harden the shoots and prepare them for winter's cooler temperature. This is the only period of the year they should be allowed to be out of the greenhouse, or suitable brick pit, as the convenience for their habitation may be. During winter they were kept in a *cool*, not *frosty*, light situation of the house. In March following they were again re-potted into 16-sized pots, and in August into 8's, in which they have subsequently bloomed, and were specimens of first-rate excellence. The last March a portion of the ball of each was taken away, and some fresh compost added, and during the past season received the admiration of all who saw them, not only being plants of large size, but literally covered with bloom, and amply repaying for the attention paid to their management.

In order to keep up a youthful succession, to replace the results of deformity and death by old age and casualties, each spring a plant or two should be put in course of preparation. Those kinds, as *L. biloba*, which are not naturally so bushy as *L. formosa*, &c., may be rendered more so by often stopping the side shoots, allowing the central one to proceed to the height it is desired to have the bush ultimately.

NOTES ON NEW OR RARE PLANTS.

ACACIA MÆSTA—MOURNING WATTLE.

Fabaceæ. Polygamia Monœcia.

THIS is a greenhouse evergreen shrub, having its short pinnatifid foliage of a very dark, dull green colour, but like most of its tribe it is a very ornamental plant, and bears a profusion of fragrant lovely yellow blossoms, hanging pendant in masses, producing a beautiful effect. Each raceme is near an inch long. We do not know where it is to be procured, but it certainly deserves to be grown. Scarcely any plants are more to be admired for the sitting-room than Acacias, their growth and foliage being neat and elegant. Figured in *Bot. Reg.*, p. 67.

ANSELLIA AFRICANA—AFRICAN ANSELLIA.

Orchidaceæ. Gynandria Monandria.

Mr. Ansell, a gardener, who went from England with the Niger expedition, discovered this plant in the Island of Fernando Po, growing upon a palm tree. It has bloomed beautifully in the collection of Messrs. Loddiges, of Hackney, where it grows admirably in pots filled with decayed sphagnum moss. The flowers are produced in large terminal panicles, each blossom being about two and a half inches across, green marked and blotched very beautifully with dark brown velvet; labellum, pink and yellow. It is a noble plant, well deserving to be in every collection of Epiphytical Orchids. Figured in *Bot. Reg.*, p. 30, and *Pax. Mag. Bot.*, Dec.

CAMPANULA NOBILIS—NOBLE BELL-FLOWER.

Campanulaceæ. Pentandria Monogynia.

A hardy herbaceous plant, sent from Chusan and Shanghae in China by Mr. Fortune, the Horticultural Society's collector. Its root leaves are deeply heart-shaped, of a bright pale green, and placed on footstalks from six to nine inches long, forming a large tuft. From among them, and to more than twice their height, rises the flowering stem, branching a little at the bottom, and upon its divisions producing several fine nodding flowers, perhaps the largest yet seen among the genus Campanula. They are something like those of Canarina, nearly three inches long, and one and a half in diameter. The corolla is light purple on the outside, but paler within, being almost flesh colour, abundantly spotted on both sides with bright rosy purple. It bears considerable affinity to the Canterbury Bell (*C. medium*), although it is perfectly distinct, and a very handsome addition to the flower-garden. Like most of the tribe, it is said to require a copious supply of water during its period of growth in the spring months. It is increased easily by dividing the roots, and probably by seeds also. Figured in *Bot. Reg.*

CLEMATIS TUBULOSA—TUBULAR-FLOWERED VIRGIN'S BOWER.

Ranunculaceæ. Polyandria Polygynia.

An upright branching plant, growing two feet high. It is a native of Northern China, and is grown in the greenhouse in this country. The flowers are produced in axillary and terminal corymbs of a bluish-purple. It is a pretty species, each blossom being about an inch across. Figured in *Bot. Mag.*, p. 4269.

CÆLOGYNE OCHRACEÆ—OCHRE-SPOTTED CÆLOGYNE.

Orchidaceæ. Gynandria Monandria.

From the Indian Mishmee Hills, where it is common. It has bloomed in the collection of Thomas Brocklehurst, Esq., of the Fence, near Macclesfield. The flowers are produced in erect racemes of about six in each. They are a pure white, with bright orange blotches on the lip; they are very fragrant too. Figured in *Bot. Reg.*, p. 69.

ESCALLONIA ORGANENSIS—ORGAN MOUNTAIN ESCALLONIA.

Escalloniaceæ. Pentandria Monogynia.

Messrs. Veitch received this plant from Mr. Lobb, their collector, who discovered it on the Organ Mountains. It is a shrub, growing about a yard high, the stems and branches being of a rich red-brown colour. The flowers are produced in terminal cymes, of a deep rose with a white eye. The tubular part of the flower is about a quarter of an inch long, and across the top (limb) nearly half an inch. It is very distinct from the sorts previously in our collections.

FRANCISCEA AUGUSTA—AUGUST FRANCISCEA.

Scrophulariaceæ. Didynamia Angiospermia.

A fine evergreen stove shrub, with narrow elliptical leaves, and partaking much in the character of growth of *F. acuminata.* The flowers are of a rich blue-purple colour, more than an inch across, and produced in corymbs said to be even larger than those of *F. hydrangœformis.* It is in some of the London nurseries.

HELIOPHILA TRIFIDA—TRIFID-LEAVED HELIOPHILA.

Brassicaceæ. Tetradynamia Siliquosa.

A native of the Cape of Good Hope, from which it was introduced in 1819, and is known also by the name of *H. pinnata.* It is a half hardy herbaceous annual, and does well in the greenhouse, or if raised in pots, and turned out in the open borders in May. It grows about a foot high, branching, and produces a profusion of spikes of lovely blue flowers, having a white centre. Each blossom is three quarters of an inch across. Figured in *Bot. Reg.*, p. 64.

HOYA IMPERIALIS—IMPERIAL HOYA.

Asclepiadaceæ. Pentandria Digynia.

This, it is said, is the most noble climbing plant ever introduced into this country. It bears large clusters of flowers, of a most beautiful white waxy texture, similar to the well-known lovely H. carnosa, except that the tiara-like rays in the centre are more of a bright purple than crimson colour. Each separate flower, we are informed, measures three inches across, and being grouped together in large umbels their appearance must be surpassingly magnificent. It was discovered in Borneo by Mr. Low, jun., who some time ago went out purposely to collect plants for the Clapton Nursery establishment. In remarking upon it, in a letter from Sarawak, dated 12th January, 1846, Mr. Low observes, " On the next day, when in the territory of the Gumbang Dyaks, I found another curious plant, belonging to Asclepiads; it is an epiphytal climber; there was but one individual, growing from the decayed part of a tree, also overhanging the river. The flowers are large and in umbels; the leaves are leathery, and the stem abounds in a white, perhaps acrid juice. The contrast between the purple of the petals and the ivory white of the parts of fructification renders it highly beautiful." The leaves are lanceolate, six inches long, and the stems woolly. It is an invaluable plant, and we hope soon to see every stove ornamented with it.

HYDROLEA SPINOSA—SPINY HYDROLEA.

Hydroleaceæ. Pentandria Digynia.

A most beautiful and neat growing evergreen greenhouse shrub, introduced many years ago, but from an entirely inexplicable cause, for it is of easy multiplication by cuttings and grows freely, it is still a somewhat rare plant. It forms a compact bush, about a foot high and as much across. The flowers, produced with remarkable freedom, are of a lovely bright blue colour, rather larger, but of a similar shape to, *Anagallis Monelli.* It deserves to be grown in every greenhouse, and will also, especially on account of its colour, of which there is a deficiency, be found a valuable acquisition in the summer flower garden, where it will succeed well if planted in a mixture of sandy peat and vegetable mould. Figured in *Pax. Mag. Bot.*, Dec.

IMPATIENS PLATYPETALA—BROAD-PETALLED BALSAM.

Balsaminaceæ. Pentandria Monogynia.

Messrs. Veitch imported this very pretty flowering species from Java. It is a perennial plant, and requires to be treated similar to Gloxinias, Achimenes, &c. It was exhibited during the last summer at one of the Horticultural shows at Chiswick, and much admired. It blooms profusely, and so open are the beautiful rose coloured flowers, as somewhat to resemble *Achimenes grandiflora*. Each blossom is about an inch and a half across. It flowers the greater part of summer if kept from drying winds. It increases freely by cuttings. Figured in *Bot. Reg.*, p. 68.

LYONIA JAMAICENSIS—JAMAICA LYONIA.

Ericaceæ. Decandria Monogynia.

A pretty wild plant, known in some gardens under the names of *Andromeda fasciculata* and *A. Jamaicensis*. It inhabits the high mountains in Jamaica, and forms a moderate sized shrub, branching freely and blooming profusely. The flowers are produced at the axils of the leaves, in close racemes of an inch long, and in colour are waxy white, slightly tinged with green and blush. Figured in *Bot. Mag.*, p. 4273.

ODONTOGLOSSUM HASTILABIUM—HALBERT-LIPPED ODONTOGLOSSUM.

Orchidaceæ. Gynandria Monandria.

A lovely Orchideous plant wholly new to our collections. It is from South America, where Mr. Purdie gathered it in the woods. The flowers are produced on racemes numerously, each blossom being about three inches across; sepals and petals rather narrow, green beautifully marked with transverse purple lines and dots. The stem (column) of the labellum is purple, and the lip which spreads out broad is a pure white. They are highly fragrant. Figured in *Bot. Mag.* p. 4272.

SALVIA CAMERTONII—CAMERTON'S SAGE.

Labiatæ. Diandria Monogynia.

This is a very distinct and handsome kind, with bright crimson flowers nearly as large as those of *S. fulgens*. The leaves are about an inch and a half long, of a light green colour, and possess an agreeable scent. The plant is of compact habit, and forms a bush from one and a half to two feet high. It has bloomed with us, and is well worthy of recommendation, especially for budding in the summer flower garden.

SCUTELLARIA VENTENATI—VENTENAT'S SKULL-CAP.

Labiatæ. Didynamia Gymnospermia.

Mr. Purdie sent this new species to the Royal Gardens at Kew, from Santa Martha. It is a perennial herbaceous plant, and has bloomed beautifully in the greenhouse. The stems are erect, simple or branched, two feet high. The flowers are produced in long terminal racemes. Each blossom is an inch long, tube formed with a large capped end. They are of a rich deep scarlet, very bright and showy. No doubt it will make a beautiful plant for the flower garden during summer, forming highly ornamental masses in beds. Figured in *Bot. Mag.*, p. 4271.

SWAINSONIA GREYANA—CAPTAIN GREY'S SWAINSONIA.

Fabaceæ. Diadelphia Decandria.

From New Holland, and is a very showy half herbaceous plant, sent to the Horticultural Society, in whose garden at Chiswick it has bloomed. The flowers are produced in long racemes very profusely, they are of a rosy-purple colour, with a white eye. It blooms during the summer and autumn in the greenhouse. Fig. in *Bot. Reg.*, p. 66.

ACHIMENES AND OTHER GESNERACEOUS PLANTS.

GENERAL TREATMENT.

BY WILLIAM CHITTY, STAMFORD-HILL.

DURING the past summer I was visited by a Yorkshire reader of your Magazine, who was so much pleased with the appearance of some of my Achimenes and other Gesneraceous plants as to suggest it might be useful if I would transmit to you, for insertion in the *Cabinet*, an account of the mode of culture adopted, and although much excellent information has already been communicated in your own and other publications on this subject, especially, I may mention, some very valuable remarks by a neighbour of mine in the early part of the present year (vol. xiv., p. 118), yet as my mode of treatment of these plants is somewhat different, and as I flatter myself I am tolerably successful in their management, I readily assent to the suggestion, and beg you to permit me to contribute my mite of information to the general fund.

There is no tribe of plants with which I am acquainted so well calculated for permanent decoration in the greenhouse throughout the summer months, as the different species and varieties of Sinningia, Gloxinia, Achimenes, and the summer-flowering kinds of Gesneria. I say, permanent decoration, because if previously to their introduction into the greenhouse (say about the last week in May or early in June) they have received proper treatment, each individual plant will invariably continue to flower from the time of such introduction until the end of September or beginning of October. To Gloxinias particularly this remark applies; and no plants can make a more charming display than they do when well furnished with their rich pubescent foliage, and a good proportion of beautiful flowers; these intermixed with the shining-leaved Sinningia, ornamented with its curiously spotted or self-coloured flowers, and the very distinct and charming colours of the various Achimenes. And the culture of the plants is withal so simple, that no one need be deterred therefrom by fear of not succeeding who possesses the ordinary convenience of a stove, or, for lack of a stove, a common frame heated by fermenting manure or other material.

When I remove my Gloxinias from the greenhouse to make room for its proper inmates, usually the first week in October, I cut off the tops close to the bulb, considering it preferable to do so than allow them to die down, because they are apt to rot and carry decay into the heart of the bulb; after this I place the pot on a shelf in the stove, where they receive no water throughout the entire winter until they are repotted in February, March, or April, according as the circumstances of their growth may indicate it to be necessary to perform that operation; for notwithstanding they are kept perfectly free from moisture, and the heat in which they are placed does not average more than 58 or 60 degrees, they will soon after they are cut down begin again to grow, and continue slowly so to do throughout the winter, and by the time potting season arrives some of them frequently have formed fine heads three or four inches in height, and five or six inches in diameter, ready to start with the utmost vigour when they shall be stimulated by the application of fresh soil, water, and an increase of heat. By the beginning of February I pot a few of the strongest, that seem by their forward growth absolutely to require it; but the general potting I defer until the end of the month or beginning of March. The soil I employ consists of equal parts of rough turfy bog earth and well rotted leaf mould, fully incorporated with about one-twelfth of white sand; this year I also added a good proportion of potsherds broken small, and my plants have, in consequence, been unusually fine, the particles of pot not only rendering the soil open and accessible to the roots of the plants, but forming so many reservoirs of moisture and nutriment. In potting I rub most of the old soil off the roots, and place them at once in the pots in which I intend them to flower, taking care to ensure thorough drainage. I am not partial to shifting unless I find any pushing with unusual vigour, and promising to make extra fine specimens, in which case I remove them into pots two sizes larger. When the whole are potted they receive a copious watering, and in two or three days, if a moist genial heat is kept up, their fine roots may be perceived spreading on the surface of the mould, a certain indication they are thriving, subsequent attention to watering when necessary, frequent syringing, and maintaining a genial heat, is efficient to cause the plants to progress with great vigour, and by the end of May or beginning of June the plants will begin to expand their blossoms, when they are at once removed to the greenhouse there to display and continue their beauties throughout the summer.

The mode of treatment I pursue with Gesnerias and Sinningias is similar to the above, but with Achimenes some difference in shifting is necessary to be observed. I will therefore remark that I cut them down as soon as the tops decay, and place them on a shelf in the stove, where they remain perfectly free from moisture in the same pots until returning growth in the spring has been resumed, and the young shoots have attained an inch in height. I then divide them, inserting four plants into a 54-sized pot, placing them close to the edge, and using precisely the same compost as for Gloxinias; when potted I set them in the warmest part of the stove as near the glass as possible, where, with attention to watering, frequent syringing, &c., they grow very fast, and in three weeks or a month the pots become filled with their roots; they are consequently at once removed into the pots in which they are to bloom, some into 32's, others into 24's and 12's, as occasion may require. In shifting at this time I separate the plants, retaining equal portions of the ball to each, and place them about an inch from the sides of the larger pot; this not only enables the roots to shoot with greater vigour into the fresh soil, but affords ample room for the growth of the lateral shoots, and their arrangement by tying, &c. When the flower-buds become prominent, the plants are removed into the greenhouse to bloom, where, having more air, they develope their flowers with greater perfection than in the stove, and continue for a longer time to enliven the house by their beauty.

VEGETABLE PHYSIOLOGY.

THE STEMS AND LEAVES OF PLANTS.

BY J. TODD, DENTON GARDENS, LINCOLNSHIRE.

The roots of plants, with their functions, having been described in a previous article (pages 275–277, vol. xiv.), the stems and leaves come next under consideration. The stem, in its most usual form, is that of a cylindrical column, differing from the root in its tendency to seek light and air, and in its being the immediate seat of those beautiful appendages, the leaves and flowers. The leaves are flat expansions of the cortical integument or bark, from which, however, in European plants, they are mostly articulated, and after the lapse of a few months fall away, others in due time being produced from those buds which are always developed in their axils. In bulbs, grasses, and all flowerless plants, the leaves have no distinct point of separation, being only disengaged from the parent structure by putrefaction. The stem serves as a sort of conduit, through which the moisture absorbed by the roots is transmitted to the leaves; it also serves to elevate the latter into the most favourable position for receiving the full influence of light, heat, and air, (a circumstance in plant culture of much importance,) the presence of which is indispensable to the perfect consummation of their function, viz., the conversion of the crude and watery fluid imparted to them into an inspissated and nourishing sap.

In making a transverse section of a branch or stem of any of our ordinary trees or shrubs, such as the common Hazel (Corylus Avellana) for example, we perceive it to consist of three distinct parts, usually known as pith, wood, and bark. The pith arises from the collar, or that point which separates the root from the stem, and occupies the centre of the latter from one extreme to the other. It is a spongy substance called cellular tissue, because it consists of little bags or cells. It constitutes the chief of all young shoots, and in them has always a greenish tinge, from these little cells being filled with a fluid of that colour; but as the shoots advance in age this fluid gradually disappears, and ultimately the pith becomes white. It is one of the simplest forms of vegetable tissue, and the most rapid in its development; it is, therefore, well adapted to the end for which it appears to be chiefly designed, viz., to act as a reservoir of nourishment upon which the tender leaves and vessels of immature shoots may feed, till they can obtain a more perfect means of supply.

Beneath the bark, and only separated from the pith by the medullary sheath, (an exceedingly delicate membrane, consisting of spiral vessels containing air, and forming a very thin layer round the pith,) we find the layers of wood, each of which is the growth of one year, consequently their number indicates the age of the tree. This only holds good, however, in trees of temperate and extreme northern and southern latitudes, where the powers of vegetation are for a time suspended; because in the more congenial climate of the tropics the trees experience no such check upon their vital energies, and, consequently, their annual growth is less distinctly marked, the wood of one year seeming to pass imperceptibly into that of another. In glancing at the cross section of the stem of the Hazel above cited, it will be seen that its annual zones are radiated by fine lines passing from the centre to the circumference. These lines are called medullary rays. They consist of thin vertical plates, of the same kind of tissue as the pith, of which, in fact, they are a lateral extension, establishing a connexion between the interior of the stem and the bark. The inner and outer sides of each annual layer of wood differ somewhat in their character. That side lying nearest the pith is composed chiefly of sap-vessels or ducts, organized in the early part of the summer, from a viscid fluid called cambium, which is secreted, in the spring, between the bark and the wood. Through these vessels the sap, taken up by the roots, ascends to the leaves. That side of the woody layer lying nearest the bark is of a more compact texture, being composed of woody fibre, elaborated and sent down by the leaves much later in the summer. It is a very firm tissue, and gives to the stem great mechanical strength.

The bark is the external covering of the stem, and has justly been termed the universal leaf of a vegetable, because in it the proper juice of a plant receives its final elaboration. It is provided with a system of branching vessels analogous to those which are seen on the under surface of a leaf. Through these vessels the elaborated sap is conveyed, and thence, by means of the medullary rays, to every part of the system. The distribution of the proper juices of a plant furnish a fine display of Divine intelligence. Some of it is expended in the production of new layers of wood, some in the production of new branches; the leaves require a definite quantity, so also do the flowers and fruits; a portion is also sent downward to the root, and appropriated to its elongation and to the development of additional fibres, and better to enable the stem to support the ever-increasing weight above, a quantity is deposited in the cells and vessels about its centre; and, lastly, it is secreted in great profusion by the new wood and bark to form cambium, and to nourish, in the spring, the newly-opening buds, until the roots are called into activity.

The leaves, as has been before observed, are flat expansions of the bark. They are usually supported upon foot-stalks, and consist of a principal vein or mid-rib, whose ramifications form a sort of net-work, the interspaces of which are filled with cellular tissue. And then, better to protect their juices from excessive evaporation, the whole is covered with a thin skin or cuticle, studded with innumerable minute orifices (stomata), which open and close in conformity to the vicissitudes of the climate, and serve to regulate the amount of exhalation, &c. They are to a plant what the stomach is to an animal; for as the food taken into the stomach of the latter undergoes a series of chemical actions, its nutritive chyle being separated and taken up by the lacteal vessels, and thence, by means of the thoracic duct, to the blood-vessels, wherein it circulates and ministers to the growth and sustenance of the whole body; so the food conveyed into the leaves of a plant is also subjected to chemical action. By the agency of light its water is decomposed, and the superfluous portion (in some plants about four-fifths of the whole quantity introduced) passed off by exhalation; and the remainder, after receiving the necessary constituents from the atmosphere, is returned in the shape of proper juice, through the veins of the leaves to those of the bark, and thence by the medullary rays to every part of the structure.

BRITISH PLANTS:

WITH OBSERVATIONS ON THEIR CULTURE.

BY W. JOHNSTONE, ESQ., BALLYKILBEG HOUSE.

Perhaps in these few remarks there may be nothing very new; and we are convinced that the flowers selected are not the only ones deserving of attention, if, indeed, many others are not much more so; but they are simply selected because with them we have some small acquaintance, and with a hope that, by making a commencement, deficient of merit though it be, to induce others, more capable and better qualified, to come forward with their pens in behalf of the very lovely floral beauties of this our own dear sea-girt isle.

I am convinced that many rich gems might be added to the garden parterres from our meads, marshes, and mountains, which are heedlessly pulled and cast away by some rustic wanderer, or bloom unnoticed in the habitations of those birds of the waste, the bittern and ptarmigan.

If many a native flower that now springs up, blooms, and withers away, unheeded and uncared for, were transferred to the soil of the garden, where art, with her fostering hand, would be ready to assist nature, we should have plants which might fairly challenge comparison with the showy beauties of warmer climes. Any one knows what has been done with the Primrose, the Daisy, the Pansy, and the Violet; and if some patriotic lover of nature would transfer some of the botanical ornaments of our hills and dales to his garden beds, and devote to them a moderate share of time and attention, I am confident that very much might be done, and that the devotion of such time would be repaid in the production of such lovely novelties as the imagination has not yet pictured, and would confer a very great benefit on the horticultural world in general. The object would not be at all difficult of attainment, and I hope many fair ladies, with their tender hands, may be induced thus to effect the removal of some of our own sweet flowers from their wild homes beside the mountain stream and woodland glade.

Cypripedium calceolus.—This lovely plant is certainly the queen of British Orchids, and it is to be lamented it is so rare. It is generally said to be an "inhabitant of woods in the north of England," but we question if plants of it could be procured at all in the wild state, or in their native habitat. So very rare is it, that we are informed by a gentleman who has a large clump in his possession, that C. parviflorum has been frequently shown for it at the Edinburgh exhibitions. Now, independently of the superior size of C. calceolus, which is nearly double that of C. parviflorum, the calyx of the former is yellowish-green, while that of the latter is greenish-brown—in mature specimens brown with green tips. Cypripedium calceolus flowers about the middle of May. The clump already mentioned is growing in sandy peat, and has not been moved for twenty years.

Melittis melisophyllum.—In general appearance this plant is not unlike the Sages. Though it has nothing very remarkable about it, yet it is well worthy of a place in the flower-garden. During June and July its pretty pink and white blossoms form no mean object of attraction, though, on its leaves being handled, the same unpleasant perfume common to the dea or dead-nettle (Lamium purpureum), may be perceived. It should be grown in good loam, and propagated by dividing the roots, by cuttings struck in heat, and, perhaps, by seeds, but this I have not yet ascertained.

Pinguicula grandiflora.—Few of our flowering plants, or, indeed, those of most other countries, surpass in simple loveliness the present subject of our remarks. Hooker says, "This plant, apparently as rare on the Continent as in Britain, and perfectly distinct from P. vulgaris, may be easily cultivated for a number of years. The old leaves die away in winter, and buds, or hybernacula, are formed, which expand into perfect individuals in spring. Few plants exhibit a more beautiful appearance early in the year than a cluster of Pinguicula grandiflora, blossoming under the shelter of a common frame." It may be raised from seed. I have found P. vulgaris growing in rotten blocks of wood, kept always moist by a mountain rivulet. P. lusitanica, with its pretty pale lilac blossoms, is found on the Mourne Mountains. If a cross could be effected between this and grandiflora, as it is highly probable it might, so as to have the size of grandiflora with the colour of lusitanica, it would be a lovely addition to this tribe.

Tulipa Sylvestris.—This, our native type of an extensive genus, is, as its name implies, a native of the woodlands. I believe that, in common with Tulipa Clusiana, it changes its position by forming bulbs at the extremity of long fibrous roots, descending from the old root. It flowers a month earlier than the garden sort, and is considerably smaller, of a pale yellow or canary colour, having the exterior of the three outside petals, or calyx, greenish. It is a delicate looking plant, and is particularly interesting as belonging to the British flora.

I have transferred Orchis latifolia from a ditch to a bed in my garden, which is considerably lower than the surrounding ones, and it has succeeded admirably. All the Orchids are worth trying. *Saxifraga oppositifolia*, with its lovely little pinkish-lilac flowers, produced in March, is also a very desirable plant for a rockery or flower-bed. Many others might be enumerated; however, I will not at present trespass further on the pages of the CABINET, but hope some one will favour me, and its numerous other readers, with articles on this subject, and that my humble efforts may be the means of inducing some competent person to take it in hand, when I trust in a brief space of time to see our too long neglected native plants occupying their proper position in every garden throughout the land.

ATMOSPHERICAL CHANGES INDICATED BY PLANTS.

BY ANAEL.

> "Closed is the pink-ey'd Pimpernel,
> 'Twill surely rain; I see with sorrow,
> Our jaunt must be put off to-morrow."—*Jenner.*

AN attentive observer of nature gathers many a useful lesson and many a practical observation from objects, that, to the vain or ordinary observer, are allowed to occur unheeded; and whilst our scientific men are exploring the solar system, to unravel the mystery of the many aërial phenomena, and predict the changes that are daily and hourly occurring, it is pleasing to remind the more modest lover of nature, that beneath his feet, and surrounding him on every side, are objects replete with information and interest, affording many singularly beautiful and curious facts connected with the changes of the weather. The vegetable kingdom was the calendar in which the great Linnæus examined as a directory of the seasons, and which he exhorted his countrymen to observe, with all care and diligence, as the surest guide by which to direct their operations in the field and garden. "Why," says Pliny, (*Nat. Hist.*, b. xxiii., ch. 25,) "does the husbandman look up to the stars, of which he is ignorant, whilst every hedge and tree point out the season by the fall of their leaves?" A circumstance indicating the temperature of the air in every climate, showing whether the season be early or late, and constituting an universal rule for the whole world. The minor changes in the atmosphere, with which our variable climate makes us so familiar, are so accurately foretold by many plants, that the attention devoted to its consideration will be amply repaid by the discovery of such interesting properties.

> "Flowers shrinking from the chilly night
> Droop and shut up, but with fair morning's touch
> Rise on their stems all open and upright."—*Montague.*

The sensitive indications developed by the common Pimpernel (Anagallis arvensis) are so well known, that it has been entitled "The Poor Man's Weather-glass." It is

> "Of humble growth, though brighter dyes,
> But not by rural swains less prized,
> The trailing stems allure
> Of Pimpernel; whose brilliant flower
> Closes against the approaching shower,
> Warning the swain to sheltering bower,
> From humid air secure."—*Moral of Flowers.*

Its bright tiny flowers close some hours before the occurrence of rain, and "go to sleep," or close up soon after noon, expanding again at seven in the morning.

The Germander Speedwell (Veronica Chamædrys), so universal a favourite in every hedge-row, closes its lovely blue flowers on the approach of rain, and as surely opens them again when the storm is overpast.

> "Not for thy azure tint, though bright,
> Nor form so elegantly light,
> I single thee, thou lovely flower,
> From others of the sylvan bower,—
> Thy name alone is like a spell,
> And whispers love, in "'Speed-thee-Well.'"

It is observed that if the Siberian Sowthistle shuts at night, there will generally ensue fine weather on the next day; and if it opens, cloudy and rainy. If the single African Marygold remain shut after seven A.M., rain may be expected. If the Trefoil contract its leaves during the day, heavy rain generally ensues; and Lord Bacon has observed, that its stalk is more erect against rain.

The common Chickweed (Stellaria media), in fine weather, supports its flowers upright, and open from nine in the morning until noon; but if it rains they remain closed, after rain they become pendant. This plant, it is said, affords "a remarkable instance of the sleep of plants, for every night the leaves approach in pairs, including within their upper surfaces the tender rudiments of the new shoots; and the uppermost pair but one at the end of the stalk is furnished with longer leaf-stalks than the others, so that they can close upon the terminating pair and protect the end of the branch."

The Purple Sandwort (Arenaria rubra) is another example of a true prophet prior to a coming shower. The flowers, a beautiful rosy-purple, expand themselves only when the sun shines, and close again when the shades of evening draw in, or before a coming shower.

"Among the loose and arid sands
The humble Arenaria creeps;
Slowly the purple star expands,
But soon within its calyx sleeps."—*Agnes Strickland.*

The great white ox-eye (Chrysanthemum leucanthemum), foretelling the coming storm, closes its flowers.

"There gay Chrysanthemums repose,
And when stern tempests lower,
Their silken fringes softly close,
Against the shower."—*Agnes Strickland.*

The Goat's-beard (Tragopogon pratensis) will not, in cloudy weather, unclose its petals.

"Broad o'er the imbricated cup
The Goat's-beard spreads its golden rays;
But shuts its cautious petals up,
Retreating from the noontide blaze."—*C. Smith.*

This plant has obtained the name of "John go to bed at noon;" and the farmers' boys, in some parts of the country, it is said, knowing this, regulate their dinner time by the closing of the Tragopogon.

The Gentianella (*Gentiana acaulis*) is sensibly affected by approaching moisture in the atmosphere:—

"Oh, would my heart were like to thine,
Thou dark and lovely flower,
Open whene'er the sun doth shine,
But closed against the shower;
Gladly receiving all that's bright,
Refusing all that's ill,
Conscious of tempest and of blight,
But pure and shielded still.

"The tempest broods—how keen thy sense—
Each leaf is folded fast,
And thou hast made thy self-defence
Against the sweeping blast.
Harmless the winds have passed thee by,
The rain drops find no rest;
Lightly they fall, as tear or sigh,
Upon thy guarded breast."—*Anon.*

The Water Lily (*Nymphea alba*), "the Naiad of the river," and several others of that tribe of plants, in serene calm weather, expand their leaves in the day time and contract them during night:—

"Come, seek the Lily's still, calm haunts, and see
The waters sporting round their pearly cups;
If ye e'er gazed on aught more beautiful,
Oh tell me what it was, for ne'er have I."—*Miss Twamley.*

The common and despised Dandelion (*Leontodon taraxacum*) is one of the most correct "dial flowers," opening at seven in the morning and closing at five in the afternoon:—

"Leontodons unfold
On the swart turf their ray-encircled gold;
With Sol's expanding beam the flowers unclose,
And rising Hesper lights them to repose."—*Darwin.*

Most of the Hawkweed (*Hieracium*) tribe also open their flowers to the morning light, going to sleep again in the afternoon.

"See Hieracium's various tribes
Of plumy seed and radiant flowers,
The course of time their bloom describe,
And wake or sleep appointed hours."—*C. Smith.*

I might enumerate many other kinds of flowers, equally accurate with the above in their various times of expanding; but think I have said sufficient to excite the attention of an observator to so interesting a matter. I ought not, however, to forget to mention the lovely harbingers of spring, which will soon gladden us by their appearance —Snowdrops, Crocuses, and

"Pale Primroses,
That die unmarried ere they can behold
Bright Phœbus in his strength."—*Shakespear.*

The harbinger of summer, too, is it not the Hawthorn? of which, I may add, I have heard it observed, a sure sign of a hard winter is when this plant is unusually fruitful. How rich a gem would our hedge-rows lose were this shrub absent from them.

"Gives not the Hawthorn-bush a sweeter shade
To shepherds looking on their silly sheep,
Than doth a rich embroider'd canopy
To kings that fear their subjects' treachery?
Oh, yes, it doth; a thousandfold it doth."—*Shakespear.*

THE PROVENCE, OR CABBAGE ROSE:

ITS CULTURE IN FORCING.

BY A LONDON (WEST END) FLORIST.

For the last fourteen years my practice in forcing this Rose, which is unequalled for the purpose, has been very extensive; and from February the 1st to the middle of April I cut thousands of its magnificent highly-fragrant flowers. For years previous to particularly turning my attention to forcing Roses, I had noticed its partial adoption by many nurserymen; but not one seemed to give it that attention it merited. I resolved, therefore, to enter into it at once with energy, and extensively too.

In my visits to other establishments I discovered that it was essential to success that the plants should have a due preparation for the process of forcing them. In November, 1831, I procured two hundred plants, in pots, of the Provence or Cabbage Rose. These I obtained of a person who had duly attended to their preparation, but who was obliged to give up his entire establishment for building purposes, and who was retiring from business. On obtaining the plants, being November 28th, I found that many of the plants showed buds about bursting. I, therefore, placed them in coal-ashes, nearly up to the rim in a cold pit frame, where I could protect them from frost. About half of the plants had been pruned in short, each shoot to three buds; one-half of such plants I took into the forcing-house about the middle of December, and the other in the first week of January. The lot I procured unpruned I cut them into three buds at that time, and took them in for forcing at the end of January and the middle of February. I had them plunged in a pit of tanners' bark and dry leaves up to the rims; the house is heated around, being double-roofed, by hot-water pipes, having pot tanks placed along the upper side of the pipes, which are filled with water, to evaporate and induce a moist atmosphere at pleasure. I used manure water once a-week at the roots, in a milk-warm state, and soft water of a similar degree of temperature on all other occasions. I gave them a syringing of water over the tops once a-day, in the morning, and as the season advanced in the evening also. When any appearance of green-fly was seen, immediate application of tobacco-water was applied, and destruction followed. By due attention, having the plants forced in as gradual a manner as circumstances would admit, I cut from nearly every plant from one and a-half to two dozen roses. The first were gathered early in February, and I had an ample supply till the end of April.

As the plants ceased blooming I had them removed into a warm greenhouse, so that they gradually hardened; and about the middle of May I turned them into the open air, up to the rim in a bed of rich soil, in a good situation, where they were watered, &c., as necessity directed, avoiding starting the plants into a second growth, as if allowed would most materially injure such plants for forcing. When I apprehend a premature disposition to blooming, I remove the plants, and plunge them behind a wall or thick beech hedge (this tendency sometimes appears in September), which check answers the purpose designed. When the plants had hardened their shoots, having completed their growth, I repotted them into pots a size larger, using a rich leaf soil and loam, of equal parts, and placed them in the border as before. I pruned them, and forced them the second season very successfully. I should have given them a year's rest, by pinching off all flowers, and improving the wood for forcing the year after; but I had not a stock of younger plants duly prepared to supply me with Roses, and thus necessity induced me; otherwise I should have done as I since have—allowed one year's rest and the alternate year forced them.

To cultivate Roses for forcing successfully, it is necessary to prepare them from the earliest stage; it will not do to take up a plant out of the ground, compress the roots into a pot, and then to bring it forward by immediate steps into a course of growth adapted to the object in view. The plant must be grown from its infancy in a pot. Sensible that such a course was the only real one, at the time I purchased the two hundred plants, which I forced as above stated, I procured three hundred layers, which had been laid in the previous spring; these I pruned to three eyes, and potted them in a rich compost in 32-sized pots, plunged them over the rims in a good warm border, watered them, and in a few days laid over the surface six inches thick of dry leaves, upon which I sprinkled a little spent bark to retain them in the position. These materials keep the frost from the roots better than any other material I have tried.

If there be a cold frame or pit in which the plants could be plunged, so much the better for them to be so placed. I had not that convenience then. The plants were allowed to grow where plunged in the border, duly watered, &c., till the following October. The plants were then pruned to three buds on each side shoot, put into the cold pit till February; I had them then removed into the forcing-house, giving them every desired attention, and the first week in April I repotted them into 16-sized pots, and retained them there till the first week in May, when they had finished their growth. I then placed them in a flued pit, which I kept about as warm as a green-house, gave them sufficiency of air, &c.; the shoots became firm, and hardened gradually; and about the 21st of May, I had the plants taken out, and the pots were plunged up to the rims in a good aspected border. As I before observed, I am always watchful about August and September that a second growth does not take place, but remove them to a cooler situation to check it when such is likely to occur.

About the middle of October I remove those plants I wish to force into the cold pit frame, and prune them to three buds on each shoot; and early in December take them into the house for forcing as my bearing crop. A usual succession are taken in, as I before remarked, so as to supply me through the season. So universally are Roses in esteem at the spring season, that although I grow so many I have always a demand for my stock. Each successive year I raise a supply of layers, pot and repot, so that I now have annually a supply of young vigorous plants, which produce me a splendid bloom, amply repaying for the attention given to so lovely a flower. Whoever pursues the same course of management will be certain of success.

HINTS ON THE MANAGEMENT OF CAPE HEATHS.

BY A LONDON EXHIBITOR.

It used to be a generally received opinion that Cape Heaths were very difficult to manage. From the simplicity of the modes of culture recommended in communications inserted in former Numbers of the *Cabinet*, I was encouraged to attempt their cultivation, and have now succeeded most admirably. The following particulars contain my general routine of management.

I possessed frames of the usual kind, and observing that the young plants of two or three years old in the superb collection of Mrs. Lawrence, at Ealing Park, were kept in spring and summer in frames, the plants standing upon bricks or tiles, and the frames raised up four or five inches, being supported on a brick on edge at each corner, in order to admit a current of air to pass through the plants, I had two of my frames so fixed, and early in April, 1844, I purchased a selection of kinds I had marked down at exhibitions, and observed in the nursery collections around London; the plants were of a youthful age. I re-potted them as follows: —From a nurseryman (a celebrated grower), I procured a load of peat, which had been obtained from three sundry places in the neighbourhood of London, and which, in equal parts, had been incorporated together in its rough turfy state.

The soil I wanted for use then I chopped up, leaving it quite as rough as I could use for potting; by this process the turfy portion is mixed up with the other more naturally, and it keeps the soil open for the passing of water, air, &c. To the soil I added about one-sixth part of what is usually termed silver, or Calais sand, and a sprinkling of bits of charcoal, each about the size of a horse-bean. These, being well mixed up by the hand, composed my compost, and which proved to be all I could desire. I put in the pot a good drainage of broken crocks, and over them some pieces of turfy peat. In potting, I placed the plant as high in the centre as the rim of the pot, and when the compost was properly pressed around the ball the sides were about half an inch below the top of the rim. This, whilst it allows a sufficiency of water for the plant, does not retain it unduly around the main stem, which has often proved fatal when not guarded against. After potting, I gave them a good watering, and placed them in the frame prepared as before stated, and shaded them from midday sun for about a week. I regularly shaded the plants during the entire of summer for two or three hours during midday, when the sun was hot. The glass was wholly removed after the end of May, and only replaced the beginning of August.

During summer I had a heath-house erected, double roofed; the door at the centre in the south end, as it was placed due north and south. I had a pathway up the middle of the house, and a raised bed on each side, three feet high and four feet broad. The surface of the bed was formed with nice pebble gravel. The sides and ends of the house were brick, as high as the raised bed, and the sashes upon this wall were two and a half feet high, and made to slide down; so that, when required, they can be pushed behind the wall out of sight. This mode of admitting air provides to have a current through the house, more or less, at pleasure; and I deem it essential, in order to a successful mode of management with this lovely tribe of plants. I have the house heated by the hot-water system; a pipe being carried round the house close to the walls, and the warmth coming to the upper part of the house by an opening, which is formed between the side beds and the outer walls. The warmth rising at the sides benefits every part of the house.

At the end of September I had the plants removed from the frames into my heathery, placing the taller plants at the farthest distance from the centre walk, giving me a pretty view of the whole surface. As directed, I gave all air I could, so as just to exclude frost, and at no time, by aid of the hot water, to have the temperature of the house above 52°. During winter no watering over head is given, and although it is necessary just to keep the soil in the pots moist, not wet, yet in severe frosty weather it is better to have them rather dry than too moist.

At the following March, near the end, I re-potted all the late summer and autumn blooming plants; that being the proper season for it with this class; but those kinds which bloom in spring and early summer are re-potted as soon as they have done flowering, and are beginning to push for growth.

During summer I retained my plants in the heathery, and at all opportunities admitted whatever air I could; had the house kept clean washed, &c. The plants flourished and bloomed beautifully. I had a slight canvass cover to shade with over the roof in hot sun.

In the spring of 1845 I purchased another stock of small plants, which I kept in the raised frame through summer, and for winter I had a brick pit made, into which I put the plants, and as near to the glass as I could place them; the bottom was formed of brick-bats, over which there was placed a wooden trellis, upon which the plants were placed; this kept them dry, which is an essential in winter preservation. The ground substratum surface, upon which the brickbats were put, was formed with an inclination to one front corner, to which any casual excess of water might naturally run, and be conveyed into a drain which was provided. The covering for winter protection over the sashes was dry straw, next the glass, and mats over it. In this way the plants were not only preserved, but had a very healthy appearance. They were not in the least affected by mildew.

A few of those I purchased were affected by mildew, and over them I sprinkled a portion of sulphur, which effectually destroyed it.

By pursuing the above simple and easy mode of management, I have derived the greatest satisfaction in the healthiness of my plants, and in their profuse blooming. I am not now under the necessity of purchasing plants to keep up a young stock, having raised a quantity from cuttings of the kinds I possessed, and thus purpose to keep up a due supply every year; in addition to which, I purchase any other desirable one I see to be attractive. There is scarcely a more pleasing object than a well-selected collection of Heaths, when in bloom; and from the above detail of culture, &c., it will readily be perceived that they may be grown both easily and satisfactory, and at a trifling cost.

THUNBERGIA CHRYSOPS.

METHOD OF INDUCING ITS BLOOM.

BY RICHARD FOX, CALCLAY.

A CONSIDERABLE difficulty has been experienced in the culture of this plant, so as to bloom it satisfactorily. In page 55 (vol. xiv.) of your Magazine a cultivator stated that he had succeeded to bloom the plant by stopping the leads, and thus induced the production of laterals, which check caused it to bloom.

Immediately I read the remarks alluded to, having a strong plant, I pinched off all the leads, and I had a plentiful production of side shoots, which were robust, and from four to six inches long by the end of the season, but I had not one flower. At the end of October I placed the plant in the coolest part of the house, so that its growth be gradually checked, and allow it a season of rest. Water was gradually withheld too, and only as much given as would prevent it withering; this treatment was pursued till the end of February, when I removed it to a warm situation, fully exposed to the light. Without disturbing the entire ball of earth, a portion of the surface of it was removed and fresh compost added. A liberal supply of water was given as it progressed in growth. Twice a week manure water was given. By the middle of April the laterals pushed an abundance of flower buds, and at the close I had the pleasure of counting 38 expanded flowers, and it has continued in fine bloom throughout the summer and autumn. The plant was bloomed in a pot 10 inches across. From the results with my plant I am persuaded that they should be prepared the first year and bloom the succeeding. This year I have several plants undergoing the preparatory process of stopping the leads, &c., and I doubt not but they will bloom satisfactory the next year. When in full flower it is a most beautiful object, well deserving to be grown wherever it is practicable.

FLORAL OPERATIONS FOR THE MONTH.

IN THE FLOWER GARDEN.

If the weather is severe be careful to afford sufficient protection to all tender things, and on all favourable occasions remove such coverings as can conveniently be done, in order to dispel the damp air. See that all newly planted shrubs remain secure, so that they are not loosened by the wind. During the hard frosts remember that all beds on lawns requiring raising with soil should be done at once, to avoid injuring the grass by wheeling. If any of the heads of tender Standard and Climbing Roses are still unprotected, they ought at once to be secured. As we have often recommended, this is best done by tying a covering of furze over them; it is better than straw, because it admits sufficient air to benefit the plant. Continue to collect during the frosty weather all kinds of soils and manures that are wasted, turfs to rot into turfy loam, sand, clean loam, peat, horse and sheep droppings, and leaves to rot, if not done already.

Amongst florists' flowers recollect that *Auriculas* and *Polyanthuses* must, in fine weather, have plenty of air, and require no water while there is the least moisture in the compost they are growing in; they must be cleansed from dead leaves, and must not be allowed to be quite dry, but moisture must be sparingly given; they are also much better when kept from freezing, not that they are tender, but they always bloom the worse for a decided check, and as the fibres of the root are next to the pot they are reached easily. *Carnations* and *Piccotees* wintered in pots are impatient of wet and confinement, therefore they cannot have too much air or too little wet; the frames they are kept in should be impervious to rain, and the bottom of the frame should be paved or cemented, and sufficiently sloping to let the wet run out at once. The lights should be off every mild day, and closed in frost and rain.

Tulips should be very carefully kept from frost, the soil they are in should not be even allowed to crust on the top if it can be avoided; if the earth be frozen down to the bulb the bloom will assuredly be less perfect than if it were not frozen.

Pinks and *Heartsease* in beds may be preserved from hard frost by covering with litter of any kind rather loosely, but not enough to deprive them of light and air.

Hyacinths in beds or borders should be covered with litter, or occasionally with mats.

Ranunculuses and *Anemones* that were autumn planted should also be protected from frost by similar means.

IN THE FORCING FRAME.

At the end of the month sow seeds of the tender annuals, as Cockscomb, Amaranthus, &c., to have them fine specimens for the greenhouse, &c., in summer; and ten-week Stocks, Russian and Prussian Stocks, &c., to bloom early, should be sown in pots, or be sown upon a slight hot-bed; also some other of the half tender kinds, to prepare them strong for early summer blooming.

The Jacobeæ and Guernsey Amaryllises, with others of the genus, should be repotted; also to have a few early blooming plants of Achimenes, Gloxinias, Gesnerias, &c., they should be started, and when beginning to push separate and pot them singly.

Cuttings of Salvias, Fuchsias, Heliotropes, Geraniums, Anagallis, Hemimeris, Lotus, Bouvardia, &c., desired for planting out in borders or beds during spring and summer, should be struck in moist heat at the end of the month, in order to get the plants tolerably strong by May, the season of planting out. Lobelias in pots should now be pushed, in order to divide and pot singly next month. Dahlia seed is best retained in the head as grown, spread singly where they will not be liable to mould, and be kept in a dry situation; the seeds will thus be kept plump. Where great increase of plants is required for next season, the roots should now be potted or partly plunged into a little old tan in the stove, or a frame, to forward them for planting out in May. As shoots push take them off when four or five inches long, and strike them in moist heat. Seed sow at the end of month.

Mignonette, to bloom early in boxes or pots, or to turn out in the open borders, should now be sown.

Protect the stems of tender plants with furze branches, dry leaves, fern, &c.

Sow in pans seeds of Rhododendrons, Azaleas, Ericas, &c., that plants will be fit to plant off in May.

IN THE COLD FRAME AND GREENHOUSE.

In this department, mind that if Camellias are not regularly supplied with soft, not too cold, water, the buds will drop; if too much, frequently that will cause them to drop too. Never give heat to Heaths as long as the frost can be kept out by coverings or otherwise. A few degrees of frost will never injure Cape Heaths, whereas fires are their ruin. Let the air blow upon them on all favourable occasions. Nothing destroys the constitution of these plants so much as close and damp houses. Should any choice varieties of Azalea indica be required for the purpose of propagation by cuttings, they may be transferred to a temperature sufficiently high to excite an early growth. Cuttings of these will be found to root with much greater facility early in the season than at a later period, besides it is of considerable advantage to have young plants strong and well established by the approach of the succeeding winter. Gladioli, Alstræmeria, Lilium, &c., grown in pots at the end of the month, should be repotted. When the weather is damp or foggy do not give air, only let a dry air be admitted. If any of the Oranges, Lemons, &c., have naked or irregular heads, towards the end of the month, if fine mild weather occur, begin to reclaim them to some uniformity by shortening the branches; by this attention they will break out new shoots upon the old wood, and form a regular head. Tender and small kinds of plants should frequently be examined to have the surface of soil loosened, decayed leaves taken away, or if a portion of a branch be decaying cut it off immediately, or the injury may extend to the entire plant and destroy it.

Chrysanthemums having now quite ceased blooming, the plants must be placed in a cool pit where they can be protected from severe frost, and have the tops cut off. If seed be desired such plants must not be headed down, and they must be kept in a dry and warm place in the greenhouse to ripen.

IN THE STOVE.

All those kinds of plants required here for ornament, and which have been duly prepared by previous culture, should be introduced in succession, giving ample supplies of water and frequent syringing over head. If any of the forced plants be attacked with the green fly, a syringe with diluted tobacco-water will destroy them. If the leaves appear bit, and turn brown (the effect of damage by red spider), a syringe of soap-suds at the under side of the leaves is effectual to destroy them. The glutinous substance remaining not only kills those it is applied to, but prevents others returning there. The plants best adapted for forcing are various kinds of Roses, Persian Lilacs, Azaleas, Acacia armata, Neriums. Gardenias, Rhodora, Heliotropes, Correas, Deutzias, Mezereums, Coronillas, Cytissus, Ribes, Mignonette, Cinerarias, Sweet Violets, Lily of the Valley, Tulips, Cyclamens; and the old Eranthemum pulchellum with its fine blue flowers, Justicia speciosa, Gesneriæ Zebrina, Justicia pulcherrima, and Aphhellandria cristata, are fine winter ornamental blooming plants. All pots or boxes containing bulbous-rooted flowering plants, as Hyacinths, Narcissus, Persian Irises, Crocusses, &c., should occasionally be introduced, so as to have a succession of bloom. Many persons who take a delight in growing some showy Hyacinths or other bulbous plants for adorning a room or window, &c. in winter or early in spring, have been frequently disappointed by the abortiveness of some and weakness of others. This principally arises from the inability of the plant to develop itself with a rapidity equal to the quantity of moisture it imbibes, on account of its upper surface being acted upon too immediately by the atmosphere, &c.; hence arises the necessity of covering the bulb. That such is a fact is evidenced by the admirable and certain success of nearly every bulb, especially Hyacinths, that is covered with about six inches of old spent bark. This or some similar light material should always be used. Even bulbs intended to bloom in glasses we prefer starting in the old bark, and then transferring them to the glasses when the shoots are about two inches long. Where such covering is not adopted, it is of advantage to have the pots or glasses kept in a dark place till the shoots are two or three inches long. Cactus plants that have been kept in the greenhouse should occasionally be brought into the stove for flowering, which gives a succession.

BRIEF NOTES AND CORRESPONDENCE.

Calceolarias.—*Newport.*—Excellent articles on the treatment of the Calceolaria have appeared in former volumes. The only secret is to get the plants strong in autumn; grow them gently with plenty of air through the winter; put them into their blooming pots in the first week in February, and then push them along in a gentle heat, keeping them free from insects, until they show bloom in April; after which they must be grown in a cool, airy place, to prevent the flower-stems from becoming too much drawn.

Polmaise Heating.—*A Constant Reader* writes: "I take the liberty to ask you, or any of your correspondents, a few questions relative to the heating of a vinery upon the Polmaise or hot-air system. It is stated in the *Gardeners' Chronicle* as being preferable to hot-water pipes. In the first place, I should like to know which you consider preferable, the hot-water pipes or Polmaise; and if you prefer the Polmaise principle of heating, I should be glad to know what size the fire-place ought to be, to heat a house forty feet long by eighteen feet wide, and what size the hot-air flue would be required to heat the said house, by carrying it along the front wall, not having a hot chamber in the centre, as stated in the *Chronicle;* or whether the flue in front would be sufficient to keep up a regular heat or not without the chamber, as the house will be chiefly for vines. Secondly, what size the cold air drains would be required, and how they should be constructed to answer the purpose. Thirdly, would it be possible to heat a small conservatory by the same fire, by an additional flue, with a damper at the entrance, so as to turn the hot air from one to the other at pleasure. If you, or any of your correspondents, will be kind enough to answer these few questions in your next following Number it will very much oblige."

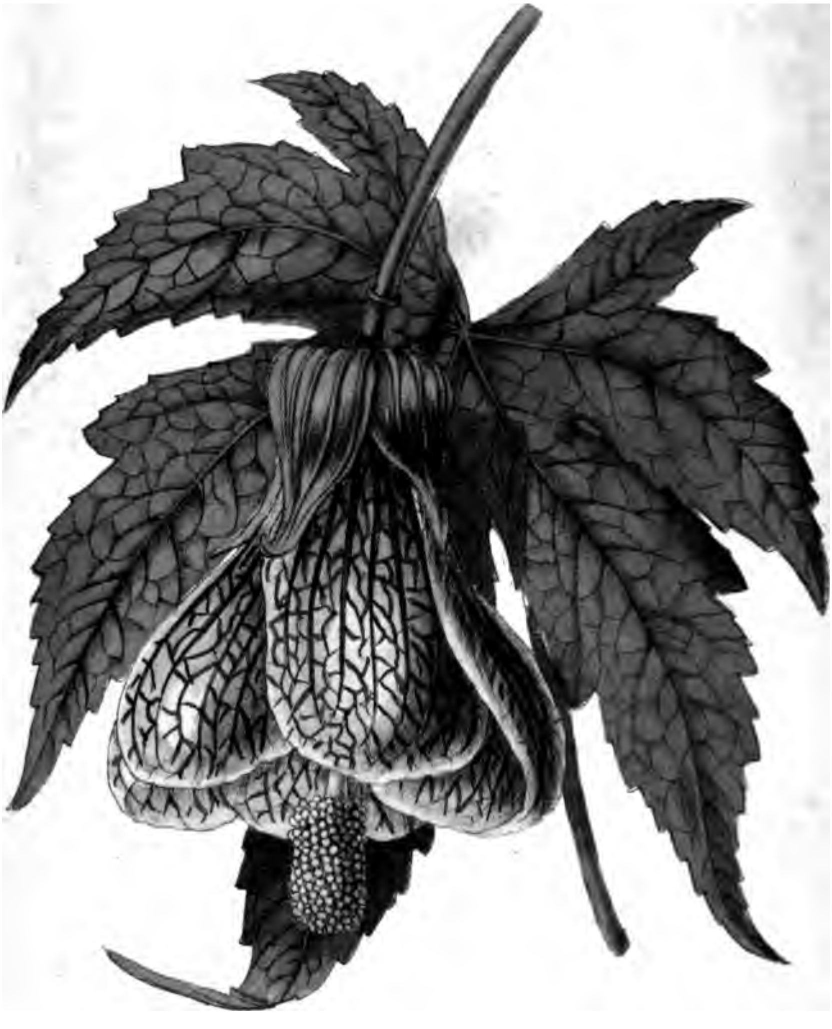
We have not yet had sufficient evidence to enable us to give our opinion on the real merits of Polmaise heating. We have, however, some experiments in operation upon a similar system, on which we shall speak more fully in an early Number. In the mean time we hope the inquiry of a *Constant Reader* will meet with attention from those of our readers who may be practically acquainted with the Polmaise plan.

Cacti.—*Lucy.*—If your plants are in good health, a little water given occasionally at this time of the year will benefit them; but if they are not, it is certainly best to avoid giving them any until spring.

Pelargoniums.—*C. C.*—The following are the varieties most in repute for forcing:—Admiral Napier, Alba multiflora, Washington. These are the earliest, and ought now to be trussing for bloom; followed by Madeline, Beck's Bella, Gauntlet, Selina, Laneii, Grand Duke, Lord Mayor, Commodore, and King Rufus.

Bulbs and Seeds.—*T. Short.*—Your bulbs from Japan may be potted immediately in a light rich soil, the pots being well drained. The Cape seed may also be sown at once in shallow pans; the soil should consist of two-thirds sandy peat, and the remainder light loam and leaf mould, in equal proportions. Place the whole in a little bottom heat, and keep them perfectly dry for a week or ten days.

Thuja pyramidalis.—*H. D.*—A variety of *T. orientalis.* It is not known why these plants are called *Arbor Vitæ,* but conjectured to be on account of some supposed great medicinal quality. In the east the Cypress is considered the tree of life, its fruit curing all diseases.



Abutilon venosum.

FEBRUARY, 1847.

ILLUSTRATIONS.

ABUTILON VENOSUM—VEINED ABUTILON.

Malvaceæ. Monadelphia Polyandria.

THE genus *Sida* was founded by Linnæus, and until the last six or eight years, comprised a number of comparatively not very beautiful species; but during this period several greatly superior kinds have been made known. We may mention *Sida Picta*, a plant well known. *S. Bedfordianum*, with flowers somewhat resembling the last in shape and colour, but produced erect, and numerously at the ends of the branches. *S. graveolens*, a very distinct species, with soft pale green foliage, and yellow flowers having a deep blood coloured eye. *S. pæoniflora*, with rosy-red flowers, the petals of which imbricate so as to form a rather globular appearance. *S. vitifolia*, possessing large lavender coloured flowers, and has grown for several years in the open air in Ireland. And, finally, our present species, which exceeds them all in the beauty of its flowers, and is equally ornamental in growth. The whole of these plants are however now more generally recognised by cultivators under the generic title *Abutilon*, which was first applied by Mœnch; we have, therefore, for this reason, on the present occasion, retained the generally adopted name. The Abutilon was formerly a section of the genus Sida, the latter having carpels (parts which hold the seeds), containing *many* seeds in each, but the former have only *one* seed in each. Nearly all the flowers of Abutilon are bladder formed, but those of Sida more expanded. In consequence of such distinctions they have been formed into separate genera, but custom in the title hitherto prevails.

In the management of *A. venosum*, or the various other species we have enumerated, there is no grounds for apprehending improper treatment, any good soil being suitable to them, though perhaps in that of a sandy nature they grow with less vigour, yet producing a greater abundance of bloom. A roomy place in the greenhouse or conservatory is the one usually assigned to these plants, but we are not aware of any obstacle which would prevent them from flourishing in summer in a sheltered open border. We have found *A. striatum* (*Sida picta*) to do well under such circumstances.

Multiplication of the various species is readily effected from cuttings planted in sand and placed in a little heat.

NOTES ON NEW OR RARE PLANTS.

AZALEA SQUAMATA—THE SCALY AZALEA.

Ericaceæ. Pentandria Monogynia.

MR. FORTUNE discovered this beautiful species on the Hong Kong Mountains in China. It has the usual habit of the Chinese Azaleas, with this peculiarity, that in its natural state it blooms without leaves, producing at the end of every little shoot a large solitary flower of a clear rosy-flesh colour, distinctly spotted with crimson on the inner side. Each flower is about two inches across. The plant blooms very profusely, and forms a very neat dwarf bush. It is a beautiful addition either for the greenhouse or the shrubbery. It is very likely to prove hardy. Figured in *Bot. Reg.*, p. 3.

CALOSCORDUM NERINEFOLIUM—NERINE-LEAVED CALOSCORDUM.

Liliaceæ. Hexandria Monogynia.

Sent from Chusan in China to the Dean of Manchester, and in whose collection at Spofforth it has bloomed. It is a slender garlic-like plant, the flowers are produced in an umbellate head, each half an inch across, and of a rosy-purple colour. Figured in *Bot. Reg.* p. 5.

CHIRITA ZEYLANICA—CEYLON CHIRITA.

Cyrtandraceæ. Didynamia Angiospermia.

This is a succulent evergreen shrub, and requires similar treatment to the Gloxinia, Gesneria, &c. The flowers are produced in profusion in branching panicles. Each flower is bell-shaped, an inch and a half long and an inch across the mouth. The tubular portion is a pale yellow, and the limb, (mouth,) blue-purple. It is an interesting and rather handsome flowering plant, well meriting cultivation. It will flourish in a warm situation in the greenhouse or stove, and small plants even bloom freely, but being a free grower, large specimens are readily produced. Figured in *Pax. Mag. Bot.*

CUPHEA PLATYCENTRA—BROAD-CENTRED CUPHEA.

Lythraceæ. Dodecandria Monogynia.

This very beautiful flowering dwarf evergreen shrub, is a native of Mexico, and is very ornamental for the greenhouse, or beds in the open air during summer. It blooms profusely, especially when under glass, in the autumn and winter. It ought to be grown wherever practicable.

The flowers are tube-formed, an inch and a half long, of a rich scarlet colour, with a white rimmed mouth. It was obtained from Mexico by J. Anderson, Esq., the Holme, Regent's-park, London. Figured in *Pax. Mag. Bot.*

CYANANTHUS LOBATUS—LOBED CYANANTH.

Polemoniaceæ. Pentandria Monogynia.

A hardy herbaceous plant, stated to have been collected in Chinese Tartary, on the snowy passes, in October, 1844, at an elevation of 12,000 feet. It has bloomed in the garden of the London Horticultural Society at Chiswick. It is a delicate little plant, producing bell-shaped flowers, with a large five-parted spreading limb, of a rich blue purple colour, lighter in the centre. Figured in *Bot. Reg.*, p. 6.

DENDROBIUM TRIADENIUM—THREE-KNOBBED DENDROBIUM.

Orchidaceæ. Gynandria Monandria.

Introduced from the East Indies, and has bloomed in Mr. Rucker's collection at Wandsworth. The flowers are produced in a close racemose-panicle, they are nearly white, with streaks of rosy-violet. The lip is white, with three deep yellow lobes at the tip. Each flower is about an inch across. Figured in *Bot. Reg.*, p. 1.

STATICE EXIMIA—LARGE PINK SEA LAVENDER.

Plumbaginaceæ. Pentandria Pentagynia.

Discovered in Tartary, south of Songaria. It is a hardy perennial, growing about two feet high, and blooms the greater part of summer. The flowers are produced in long terminating spikes, of many dense lateral ones, and are of a pretty rosy-lilac colour. It is a handsome border plant, well deserving cultivation. It has bloomed in the London Horticultural Society's Garden. Figured in *Bot. Reg.*, p. 2.

VICTORIA REGIA—THE VICTORIA WATER-LILY.

Nymphæaceæ. Polyandria Polygynia.

It has afforded us much pleasure to observe the very great improvement effected in the *Botanical Magazine* during the last two years; the style and execution of the work, as well as the very judicious selection of flowers figured, the excellent descriptive remarks, &c., the entire being under the direction of Sir W. J. Hooker, places it now in high estimation. The January Number for the present year is wholly occupied with a most interesting account of the above-named magnificent plant, and contains also four fine coloured figures of the flowers, one of the natural size fully expanded, another representing one just opening, and a third separate portions, as a fruit of it, &c. The first plate is a reduced representation of the plant as it appears in its natural situation, showing twenty-six of the fully opened flowers, unexpanded flowers, and fully formed leaves and fruit, which sketch is chiefly done from Sir R. H. Schomburgh's scene in his views of British Guiana, where he had it figured.

In order to have somewhat of an accurate knowledge of its noble appearance, these figures should be seen.

"Seldom has any plant," observes Sir W. Hooker, "excited such attention in the botanical world, the interest being specially increased by the name (Victoria) it is privileged to bear. If it could be said, in reference to the consort of His Majesty George III., that the Strelitzia was peculiarly appropriated to her, because of the patronage which she gave to botany, by improving and embellishing the Royal Gardens of Kew, much more does the name of Victoria claim to be handed down to posterity on similar grounds; seeing that Her present Majesty has been graciously pleased to make these gardens available to the public enjoyment, and even to endow them with a liberal provision for that especial purpose." We may add, that these gardens, and the collection of plants they contain, have recently been so much improved and increased, as to be far superior to any other we have seen, and certainly afford a very rich treat to the immense number of visitors. "Growing plants," proceeds Sir William, "of the VICTORIA REGIA are in the Royal Gardens of Kew, but have not yet bloomed. Of it, however, we have flowering specimens, gathered by Sir R. Schomburgh; and blossoms both preserved in spirits and dried, collected by Mr. Bridges. Sir R. Schomburgh detected the plant in British Guiana, and observes, 'It was on the 1st of January, 1837, while contending with the difficulties to stem our progress up the river Berbice, that we arrived at a part where the river expanded and formed a currentless basin. Some object on the southern extremity of this basin attracted my attention, and I was unable to form an idea what it could be; but, animating the crew to increase the rate of their paddling, we soon came opposite the object which had raised my curiosity, and, behold, a vegetable wonder! All calamities were forgotten; I was a botanist, and felt myself rewarded! There were gigantic leaves, five to six feet across, with a flat broad rim, lighter green above and vivid crimson below, floating upon the water, while in character with the wonderful foliage, I saw luxuriant flowers, each consisting of numerous petals, passing, in alternate tints, from pure white to rose and pink. The smooth water was covered with the blossoms, and as I rowed from one to another, I always found something new to admire. This beautiful flower, when it first unfolds, is white with a pink centre; the colour spreads as the bloom increases in age; and, at a day old, the whole is rose-coloured. As if to add to the charm of this truly noble Water Lily, it diffuses a sweet scent.'

"Father La Cueva, a Spanish missionary in the country of the wild Guarayos, an old man who had passed thirty years among savages, and the celebrated botanist Haenke, who had been sent by the Spanish Government to investigate the vegetable productions of Peru, were together in a pirogue upon the river Mamore, one of the great tributaries of the Amazon river, when they discovered in the marshes by the side of the stream, a plant which was so surprisingly beautiful and extraordinary, that Haenke, in a transport of admiration, fell on his knees, and expressed aloud his sense of the power and magnificence of the Creator in his works.

"On the return of Mr. Bridges from his journey through Bolivia, he found the Victoria regia in considerable abundance, and brought home in 1846, seeds in wet clay, and well dried foliage; also flowers preserved in spirits. He observes, relative to it, as follows:—

" During my stay at the Indian town of Santa Anna, in the province of Moxos, Republic of Bolivia, during the months of June and July, 1845, I made daily shooting excursions in the vicinity. In one of these I had the good fortune (whilst riding along the woody banks of the river Yacuma, one of the tributary rivers of the Mamore) to come suddenly on a beautiful pond, or rather small lake, embosomed in the forest, where, to my delight and astonishment, I discovered, for the first time, 'the Queen of Aquatics,' the Victoria regia! There were at least fifty flowers in view, and Belzoni could not have felt more rapture at his Egyptian discoveries than I did in beholding the beautiful and novel sight before me, such as it has fallen to the lot of few Englishmen to witness. Fain would I have plunged into the lake to procure specimens of the magnificent flowers and leaves; but knowing that these waters abounded in alligators, I was deterred from doing so by the advice of my guide, and my own experience of similar places.

" The Victoria grows in four to six feet of water, producing leaves and flowers, which rapidly decay and give place to others. From each plant there are seldom more than four or five leaves on the surface, but even these in parts of the lake where the plants were numerous, almost covered the surface of the water, one leaf touching the other. I observed a beautiful aquatic bird, (*Parra* sp.?) walk with much ease from leaf to leaf, and many of the *Muscicapidæ* find food and a resting-place on them. The plant occupies almost exclusively the water, with the exception of a few floating aquatics of small dimensions, amongst which I saw a beautiful *Utricularia*.

" The blossoms rise six and eight inches above the surface, expanding first in the evening, when they are pure white; changing finally (and by exposure to the sun) to a most beautiful pink or rose colour, flowers may be seen, at the same time, partaking of every tinge between the two hues, the recently expanded being pure white and the adult rosy, almost sinking under water to ripen its seed and produce a new race of plants when required. The largest flowers I saw measured from ten inches to one foot in diameter.

" I had an opportunity of experiencing the fragrance of the flowers. Those I collected for preserving in spirits were unexpanded, but on the point of opening; on arriving at the Government House, in the town, I deposited them in my room, and returning after dark, I found to my surprise that all had blown and were exhaling a most delightful odour, which at first I compared to a rich Pine-apple, afterwards to a Melon, and then to the *Cherimoya;* but indeed it resembled none of these fruits, and I, at length, came to the decision that it was a most delicious scent, unlike every other, and peculiar to the noble flower that produced it.

" The leaves are round, and the edges are turned upwards giving the leaf a singular appearance, somewhat like a floating dish.

" The plant appears to delight in parts of the lake fully exposed to the sun, and I observed that it did not exist where the trees overshaded the margins."

ORANGE, CITRON, AND LEMON-TREES:

CULTURE ADOPTED.

BY A NOBLEMAN'S GARDENER.

I HAVE observed several queries inserted in the FLORICULTURAL CABINET relative to the culture of the above class of trees, and having erected a conservatory three years ago, a portion of it was wholly devoted to the Orange, &c. The excellent success which has resulted from my efforts induces me to send the particulars for the benefit of the inquirers.

The house is heated by hot water along the front and ends; the pipes are concealed by a neat metal covering, used as a stand for plants. I had a raised pit as broad as I could allow it, leaving the pathway around. The pit was three feet deep; a substratum of stones, near a foot deep, was first constructed, and the other part filled up with compost of the following materials:—A layer of rough turfy loam, about four inches deep, was laid over the stones, then the compost, which had been previously made in proportion, as follows. Six barrow-fulls of strong turfy loam, half the quantity of well-rotten dung, and about a quarter of old rotted vegetable manure, to which a moderate sprinkling of charcoal, in bits about the size of horse beans, and others in large pieces. The compost was allowed to settle well before planting. After the trees had rooted in the compost, I gave soft (rain) water twice at the roots to once of rich manure water, always giving as much at a time as would sink to the depth of the fibrous roots. With such proviso and attention the plants have succeeded beyond my utmost expectations. In planting and arranging my plants, I had a row along the front and ends of the border, trained to a wire trellis, after the manner of espalier trees, and pruned in a similar manner. These not only bloom profusely, but bear fruit abundantly; Orange, Citron, and Lemon alike. The other trees in the bed are standards; the highest at the back. They are set wide enough apart not to interfere with each other, when they reach a due size. In order to have the heads duly arranged, I have round rods, six feet high above the ground, placed around so as to tie the branches to, and regularly distribute them. I prune so as to have the plants open and vigorous, and the best results follow such attention in the vigour and fruitful character of the wood, and size, flavour, &c., of the fruit.

I cannot avoid here observing, that in the usual management of Oranges, and other trees of the same description in greenhouses, however fine the plants, they only serve the purpose of ornament, and are otherwise useless, never producing any fruit fit for the table. The failure arises from the common practice with most gardeners of taking these trees out of the greenhouse when they put out the common greenhouse plants for the summer months; whereas, the proper course which they ought to follow, is to keep them in the house through the whole season, and to avail themselves of the removal of the other plants to apply the peculiar treatment necessary to bring them into proper bearing. From the experience which my practice has given me, I do not think that Orange and other similar trees require much warmth in the winter months; I therefore never suffer my house to be heated above 50° by fire heat until the end of February or the beginning of March, when the trees, if in good health, will begin to show blossom; the fire-heat should then be increased to 55°; but the houses ought not to be warmed above 65° at this time by sun-heat, the excess of which must be checked by the admission of air; and indeed the more air the trees have during the time of blossoming, the more certain will be the crop of fruit. My trees are washed with a hand syringe about twice a-week in the winter months, advantage being taken of the middle of the day for that work in cold weather; in summer they are washed in the morning, and it is then done every day. During the time the trees are in blossom they require more care in respect to watering. I do it less frequent, and then use a syringe with a top, the holes of which are so small that they will not admit a fine needle to pass through them. Clean soft water from the cistern in the conservatory is used for all these purposes. As soon as the fruit is set I begin to water the trees at their roots with the composition-water above described, giving more or less, according to discretion; the trees having no other sort of water during the summer months, except what little falls from their leaves when they are syringed each morning.

In the early part of June the greenhouse plants are taken out for the summer, and I then begin to force the trees, by keeping the heat in the house up as near as possible to 75°, for I do not consider that either Citrons, Oranges, Lemons, or Limes, can be grown fine and good with less heat. Whilst the forcing is going on, particular attention is paid to the waterings above described. In June I also give the trees a top dressing of the rich compost before mentioned; this is of the greatest advantage in swelling the fruit, and it is done in the following manner. The earth above the roots is moved with a small hand fork, taking care not to disturb any part of the roots; all the loose earth is then removed clear to the roots, and replaced with the compost. This operation I have performed for four years on the trees, and to it I principally attribute my success in producing such fine and abundant crops. With respect to pruning the trees, I do not know that regular directions can be given for the work, but I will state in what manner my trees are treated. Early in February they are looked over; at that time it is apparent what wood is likely to be fruitful, and as a certain quantity of old branches are yearly cut away, I take out those which seem least promising, and so make room for the younger and more productive wood. If the trees afterwards grow very strong, the shoots are shortened according to their strength, in the same way as Peach-trees are shortened. Thus the branches pruned are not only fruitful, but they are restrained to any shape desired; for no sort of fruit-trees bear the knife more patiently than those I am treating of. There is some nicety required in thinning and arranging the crop. When the fruits are about the size of small wallnuts it is proper to thin them. Two fruits are never left together, or they would neither be fine nor well formed; the quantity left to ripen also depends on the age and strength of the tree. The thinnings have no pulp when of the size above mentioned, and are much esteemed, making excellent preserves.

Having room for some plants in tubs, I had some planted in all respects as to a due proportion of drainage, compost, watering, &c., and treated in pruning too; they have thrived admirably. My composition water is prepared as follows: three wheelbarrows full of cow-dung fresh from a pasture-field, two wheelbarrows full of fresh sheep's dung, and two pecks of quick lime, are thrown into one hogshead of soft water; the mixture is frequently stirred for a week or ten days before it is used, and when applied to the plants, ought to be about the consistence of cream.

THE PLEASURES OF GARDENING:

NECESSITY OF GOOD ORDER AND ARRANGEMENT.

BY WILLIAM CHITTY, STAMFORD HILL.

AT the present advanced period in the history of gardening, when so much time and talent are devoted to elevate to the highest degree of perfection the various subjects that come within its province, it may appear almost presumption to offer any remarks on the necessity of a corresponding degree of attention being paid to arrangement, order, and neatness in the management of the flower or pleasure-garden; but if, as the late Mr. Loudon somewhere observed, "pleasure is the avowed object of the flower-garden, the shrubbery, and the pleasure-ground," and if it is also true that no well-regulated mind can derive any pleasure from a spot in which a great number of the beauties usually comprehended in the idea of a garden are brought together, without any reference to harmony and arrangement, and if, again, we too frequently find such a state of things really to exist, it may not, perhaps, be deemed altogether out of place (at least by some of your readers), if I offer a few remarks, having for their object to show, that if pleasurable feelings are expected to be excited and kept alive by a cultivated spot of either of the above descriptions, a continued attention to order and finish are absolutely necessary, in all their variety of detail. The foregoing and subsequent remarks were suggested by the perusal of the last paragraph in the Article "On the Arrangement of Plants in Masses," by Amicus, in the last December Number of your Magazine; the first sentence of which it were well if it was firmly rivetted upon the attention of the possessors of large or small gardens; "in small gardens, nothing is more unpleasing than a want of neatness and high finish." The people of England have been described by an Italian writer as "a nation working to the stroke of the clock," and the same regularity and predilection for order which characterizes the business proceedings of our countrymen has been introduced into our gardens, and it would be difficult to find more than a very few persons who could derive pleasure from such gardens as we learn the Chinese sometimes form for themselves, by having their paths, for instance, along those parts of the surface which happen to lie most convenient for that purpose, by leaving their clumps of trees and tangled thickets much as they find them, and adapting themselves to things as they are rather than arrange the plots according to any preconceived ideas of fitness, utility, or beauty. No, we must have our clearly defined walks, borders, lawns, &c.; every plant must occupy its proper position, and every circumstance arranged with reference to general effect, and a harmonious whole. But then, allowing this to be the prevailing characteristic in the formation of small gardens especially, is it not quite out of character that the future keeping of these gardens should not be such as might be expected from the original design? It must be admitted to be too frequently the case, that a garden, upon the formation and arrangement of which a considerable amount of money has been expended, is, from either the indifference of its proprietor, or unaptness of the person or persons on whom its management is devolved, scarcely ever found in such a condition as to convey anything like an idea of neatness or comfort. This remark will, perhaps, more especially apply to the winter management, or, perhaps, I should rather say, the winter neglect of many gardens, where it is customary, as soon as the leaves are fairly fallen, to make such arrangements and alterations as may be deemed necessary, dig the borders, beds, shrubbery, &c., and then abandon them for the winter; nothing more being considered necessary to be done until the return of spring; when, perhaps, the circumstance of some vernal beauty forcing itself upon their notice induces them once more to turn their attention to their garden, now in so miserable a plight from having been entirely neglected; walks neither swept nor rolled, the lawn having more the appearance of a ploughed field from accumulated worm casts, &c., that a considerable amount of labour is requisite before it can at all be entered upon with comfort, whereas, by a little weekly attention to these particulars, it might have been rendered an interesting promenade throughout the winter. Indeed, with a person really interested in a garden, it will be a rather difficult matter to decide, whether it possesses most interest in the summer or winter; for, although in summer it may be furnished with an almost infinite variety of floral beauties, symptoms of decay are everywhere apparent, withering and withered petals, flowers, and plants, continually remind the observer that a period will soon be put to the development of these beauties; while a well-regulated garden, in which there is a well-arranged display of various evergreen shrubs and trees, intermixed with the different habited deciduous kinds, suggests the idea (if I may be allowed such an expression), of substantial and unfading comfort. In this place, perhaps, I may be allowed to observe, that to add to the pleasure of walking in the garden during the winter months it is absolutely necessary that the walks be formed of such gravel, or other material, as will not adhere to the feet; for the twofold reason, that walking is rendered very unpleasant when a quantity of soil clings to the foot at every step, and also renders the surface of the path uneven and unsightly. In old books on gardening, we find prominent place given in the "Kalendarial lists of operations" to such things as "attend to polling, and rolling lawns," "keep gravel walks swept and rolled," "now is the time for trimming box-edgings, &c.," "keep the flower-beds and borders free from weeds, and evenly raked," and many similar directions, common-place enough, as every one knows, and every one, tacitly at least, admits to be necessary to the completeness of any portion of ground set apart for the purposes of recreation. Would it not help to the attainment of the desired object, if such things were more frequently brought before our notice in our periodicals? and should we not be brought to consider it of as much importance that our gardens evince high keeping, as that the plants grown by us should be so many proofs of attentive culture, ample directions for which it is mainly the praiseworthy object of our floral and gardening publications to convey? I would not by any means be understood to intimate we should have less of these directions, but with the increase of beautiful plants, and ample directions for their culture, let us have increased attention paid to order, arrangement, and keeping, so that their beauties may be displayed in the most advantageous and interesting light.

ON DESTROYING THE THRIP.

BY AN AMATEUR.

I HAD some Fuchsia plants very much attacked by this troublesome pest, to which I applied the following as a remedy, and it fully answered.

I put 20 gallons of soft water into a tub, and about half a peck of soot to it, stirring it up well once a day for several days; I then strained off the water through a coarse cloth, into a deep tub, put into it about half a peck of charcoal-dust, and a quarter of a peck of unslacked lime, and one pound of soft-soap, these were stirred up together for several successive days, and when in a clear state, I used it as follows:—

The under side of the leaves of my Fuchsias were pestered with the Thrips, I therefore dipped them overhead, and it completely destroyed the insects, but did not in the least injure the tenderest portion of the plants, either foliage or flowers. An application with the syringe might have answered had they not been so enormously attacked, and especially at the under side of the foliage.

ON THE CULTURE, &c., OF ANNUAL FLOWERS IN THE OPEN BORDER.

BY A VERY EXTENSIVE GROWER.

THIS lovely, and generally most beautiful tribe of flower-garden ornaments are of such universal service for the flower-garden, and so deservedly esteemed for fragrance, diversity of form, beauty, and variety of rich colouring properties, that are enhanced by the facility with which they may be grown, and the speedy display they afford to the cultivator, may be procured at a trifling cost, and require but little attention, that I deem it quite unnecessary to preface my observations by any apology for bringing the following remarks on their cultivation to the notice of the readers of the FLORICULTURAL CABINET. The entire class are deserving of attention; but a selection of the best is worthy of every recommendation and encouragement. I shall therefore make some general remarks upon them, and give a few rules for successful cultivation.

Annual Flowers are usually divided into three classes, viz., *Tender Annuals*, comprising such as require to be under glass during the whole period of their growth. Nevertheless, a few of them that are so termed will flourish in the open bed, turned out of pots in June, as Browallia, Salpiglossis, Cleome, Martynia, and a few others. *Half-hardy Annuals* comprise those which are usually raised under glass, and afterwards transplanted into the open border, as is done with the Ten Week, Russian and German Stocks, Asters, Zinnias, Marigolds, Brachycoma,Clintonia, Calandrinia, Hibiscus, Phlox Drummondi, and others. *Hardy Annuals* are those sown in the open garden, where they are finally to remain.

In large gardens, grounds, &c., any, or all of the Annual Flowers may be grown, so as to be in accordance with every other class of flowers, size, &c., which are attractive everywhere. There is a position suited for the noble and magnificent display of the Sunflower, as well as the beautiful humble Nemophila, &c., and when they die off there is in general a permanent provision for a winter garden of evergreen beauty in the admirable variety of shrubs, &c. In small gardens, a selection of the best, most suitable in size, and attractive in a variety of rich colours, is requisite. Annuals require to have room sufficient to stand clear of each other, in order to neatness, and for the developement of their beauties. Therefore their size and habit should be considered in connection with the garden, so that the flowers be in harmony with near surrounding objects. In order to keep up the beauty and ornament of a small plot of flower-garden, when the Annuals die off, evergreens in pots should be plenteously sunk in the beds, such as Hardy Heaths, Lauristinus, Holly, Rhododendrons, Double Blooming Berberis, Whin, Cedars, Arbor Vitæ, Box, &c. These having served the winter garden purpose, are readily removed, and a summer's culture elsewhere prepares them for the next contingency.

Tender Annuals are sown in pots in February, and placed in a hot-bed frame, or in some similar moist heated situation, and are transplanted into small pots as soon as strong enough; afterwards re-potted, &c., as is done with Cockscombs, Balsams, Amaranthus, &c.

Half-hardy Annuals are sown in pots, or on a slight hot-bed in February, or early in March, and, when strong enough, are in most cases pricked out into pots, or upon another slight hot-bed, &c., where they remain till the end of April or early in May, as the season may dictate when they are planted out where it is intended they should bloom.

Hardy Annuals are usually sown in the open ground where they are finally to remain, where it can be done, and an abundance of seed is in possession; there are many kinds will endure the winter, and such bloom early in the following spring. The time to sow for this purpose is in August and September. The spring sowing generally takes place at the end of March, or early in April. The soil being lightened up and broken fine, some finely sifted being sprinkled over it and levelled, the seed is then scattered upon it, and gently pressed into the soil, by using a piece of circular formed wood, or the bottom of a garden-pot; this being done, as much fine sifted soil is spread over the seed as will cover the smallest about an eighth of an inch, and the larger deeper in proportion, gently pressing the surface, which induces a more certain and quick germination. If the weather be showery, or the ground at the surface be moist, till the seeds vegetate and the plants appear, no other means need be employed; but if the season be dry, as soon as the seed is sown, a garden-pot, common tile, or draining tile, placed over it for a week or so, will prevent the sun and air from damaging the seed. If the seed be once rendered soft by moisture, and then allowed to become dry, its vitality is thus destroyed. This is the reason so many failures occur, and not, as is generally the complaint, through the seed being defective when sown. When a small garden has to be supplied, a few patches of seed may be sown in small pots, be raised in a gentle warmth in a room, frame, &c., and then be turned out with entire balls at the proper period, when the plants are strong enough. When a patch of plants is crowded they must be carefully thinned, so as to leave only as many as will form a vigorous supply.

The following list contains the best hardy Annuals of each class of colours:—

Systematic Name.	English Name.	Time of Flowering.	Colour.	Height in feet.
Ageratum odoratum	Ageratum	June to Sept.	Blue	2
Campanula Loreyi.	Bell Flower	,,	,,	2
Centaurea cyanus	Blue-bottle	,,	,,	3
Collinsia grandiflora	Collinsia	,,	,,	1
—— verna	,,	May—Aug.	,,	1
Convolvulus minor	Bindweed	May—Sept.	,,	3
Delphinium ajacis	Larkspur	,,	,,	2
Echium violaceum	Bugloss	June—Oct.	,,	2
Ipomœa violacea, C.	Bindweed	May—Sept.	,,	4
Kaulfussia amelloidis	Kaulfussia	June—Sept.	,,	½
Lupinus elegans	Lupine	June—Oct.	,,	1
—— nanus	,,	,,	,,	1
Nemophila insignis	Nemophila	June—Sept.	,,	½
—— grandiflora	,,	,,	,,	½
Nolana atriplicifolia	Nolana	,,	,,	½
Antirrhinum Spartium	Snapdragon	July—Oct.	Yellow.	1
Borkhausia lutea	Hawkweed	June—Sept.	,,	2
Calliopsis bicolor	(Coreopsis)	June—Oct.	,,	2
—— tinctoria	,,	,,	,,	2
Centaurea suaveolens	Yellow Sultan	June—Sept.	,,	2
Cerinthe major	Honeywort	June—Oct.	,,	1
Escholtzia compacta	Escholtzia	,,	,,	1
—— Californica	,,	,,	,,	2
Helianthus annuus.	Sunflower	July—Oct.	,,	4
Hibiscus Africanus major.	Hibiscus	June—Sept.	,,	1
Lupinus lutens	Lupine	July—Sept.	,,	2
Sphenogyna speciosa	Sphenogyna	June—Sept.	,,	1
Tagetes (various)	Marigold	July—Oct.	,,	2
Zinnia lutea	Zinnia	,,	,,	2
Amaranthus giganteus.	Amaranth	June—Sept.	Purple.	3
Campanula pentagonia	Bell-flower	June—Oct.	,,	2
Centaurea moschata	Sweet Sultan	,,	,,	2
Godetia Lindleyana	Godetia	July—Sept.	,,	1

Systematic Name.	English Name.	Time of Flowering.	Colour.	Height in feet.
Iberis umbellata	Candy Tuft.	June—Sept.	Purple	1
—— sanguinea.	,,	,,	,,	1
Prismatocarpus speculum	Venus's Looking Glass.	May—Sept.	,,	1
Schizanthus humilis	Schizanthus.	June—Oct.	,,	1
Calendula pluvialis	Cape Marigold.	May—Sept.	White	1
—— hybrida	,,	,,	,,	1
Digitalis longiflora	Foxglove	July—Oct.	,,	2
Iberis alba	Candy Tuft.	June—Sept.	,,	1
Nemophila atomaria	Nemophila	,,	,,	½
Lavateria alba	Lavatera	,,	,,	2
Schizopetatum Walkeri	Schizopetatum	July—Sept.	,,	½
Adonis æstivalis	Pheasant's Eye.	May—Aug.	Scarlet-red and crimson.	2
—— autumnalis	,,	June—Nov.	,,	..
Amaranthus caudatus	Love-lies-Bleeding.	July—Oct.	,,	3
—— hypochondria.	Princess Feather	,,	,,	3
Calliopsis atrosanguinea	(Coreopsis)	June—Oct.	,,	2
Cheiranthus ditto	Wallflower	May—Oct.	,,	2
Dianthus chinensis.	Indian Pink	June—Oct.	,,	1
—— barbatus	Sweet William	June—Sept.	,,	2
Iberis coccinea	Candy Tuft.	May—Aug.	,,	1
Papaver Rhæas	Ranunculus Poppy.	June—Sept.	,,	2
—— somnifera	Carnation Scarlet Poppy.	,,	,,	3
Persicaria orientale	Persicaria	June—Oct.	,,	3
Lathyrus coccineus.	Scarlet Sweet Pea	June—Sept.	,,	4
Tropæolum atrosanguineum	Nasturtium	May—Oct.	,,	4
Agrostemma cœlia rosea	Campion	July—Oct.	Rose	2
Clarkia pulchella	Clarkia	June—Sept.	,,	2
—— rosea plena	Double Clarkia.	,,	,,	2
Crepis rubra	Hawkweed	,,	,,	2
Goodetia rubicunda	(Œnothera)	,,	,,	2
Leptosiphon adrosace	Leptosiphon	,,	,,	1
Lychnis rosea	Lychnis	June—Aug.	,,	½
Malope trifida	Malope	June—Oct.	,,	2
—— grandiflora	,,	,,	,,	2
Silene grandiflora	Catchfly	May—Aug.	,,	1
—— armeria	Lobel's ditto	,,	,,	2
Senecia elegans.	Ragwort	June—Oct.	,,	2
Cacalia aurea	Cacalia	June—Sept.	Orange	1
Carthamus tinctorius	Dyer's Weed	July—Oct.	,,	4
Calendula stellata	Cape Marigold	June—Sept.	,,	1
Chrysanthemum coronaria	The Double Orange.	July—Oct.	,,	3
Escholtzia crosea	The Orange	,,	,,	1
Erysimum Perofskianum	Hedge Mustard.	May—Sept.	,,	2
Tropæolum minus	Nasturtium	June—Oct.	,,	4

To the above might be added others of intermediate colours, as lilac, pink, &c., which the space I may be allowed at present will not admit; but any required colour being named to the seedsman would readily be supplied. To the sorts enumerated in the preceding list many of the

German, Turkey, and China Asters are suited in colours, and Russian, Ten Week, and other Stocks; also Larkspurs, Zinnias, &c., which are often raised by sowing in the open ground in the warm southern parts of this country, but in general require in other situations to be raised on a slight hot-bed, and afterwards transplanted, &c.

Half-hardy, usually requiring to be raised in a warm frame, or in pots, &c.

Systematic Name.	English Name.	Time of Flowering.	Colour.	Height in feet.
Asters (see list below)	. .	July—Nov.	Various	2
Brachycoma iberidifolia	Brachycome	,,	Blue	2
Calandrinia grandiflora	Calandrina	June—Oct.	Rose	2
—— discolor	,,	,,	Purple	2
—— speciosa	,,	,,	Maroon	1
Clintonia elegans	Clintonia	June—Sept.	Blue	1
—— pulchella	,,	,,	Blue and White.	1
Dianthus speciosus.	Pink	,,	Crimson	1
—— latifolius	,,	,,	,,	1
Elichrysum bracteatum	Everlasting	June—Oct.	Yellow	2
Matthiola annua	Stocks (see list below).			
Phlox Drummondi	Phlox	June—Oct.	Crimson, &c.	2
Portulacca splendens	Purslane	,,	,,	1
—— Thellusonia	,,	,,	,,	1
Rhodanthe Manglesii	Rhodanthe	,,	Rose	1
Senecio flora plena alba	Double Ragwort	,,	White	2
—— purpurea	,,	,,	Purple	2
Tagetes (various)	Marigold, French and African.	June—Sept.	. .	2
Viscaria oculata	Viscaria.	,,	Rose	2
Zinnia (various)	. .	,,	Various	1

Some of the above kinds of annuals having an extensive number of varieties, the following enumeration of them is given, to aid in a more general selection :—

GERMAN ASTERS.—1. Flesh coloured; 2. Pale Rose; 3. Pale Blue; 4. Dark Blue; 5. Rose coloured; 6. Pale Lilac; 7. Dark Red; 8. Ash Grey; 9. White; 10. Light Blue; 11. Dark Blue-edged; 12. Light Red and White; 13. Dark Lilac; 14. New Dwarf White; 15. White Anemone Flowered; 16. White Quilled; 17. Striped Red and White; 18. Red Anemone Flowered; 19. Mixed coloured Anemone Flowered; 20. New Dwarf Red; 21. Dark Red and White; 22. Light Blue-edged; 23. Yellowish White; 24. White; 25. Flesh-coloured; 26. Light Blue, dark ground; 27. Pale Blue-edged; 28. Light Red.

GERMAN TEN WEEK STOCKS.—Russian Stocks, *Close flowered.*—1. Deep Rose; 2. Pale Rose; 3. Peach-coloured; 4. Violet, with White spots; 5. Pale Rose, with White spots; 6. Dark Grey; 7. Flesh-coloured; 8. Dark Blue; 9. Peach-coloured; 10. Light Blue; 11. Maroon; 12. Light Brick Red; 13. Carmine; 14. Chestnut; 15. Light Brown; 16. Dark Brown; 17. Red Brown; 18. Dark Cinnamon; 19. Cinnamon, Yellow Crown; 20. Light Violet; 21. Striped

Rosa Centifolia; 22. Frankfort Red; 23. Copper-coloured; 24. Ash Rose; 25. Poppy Grey; 26. Pale Grey; 27. Variegated; 28. Dark Ash-coloured; 29. Light Maroon; 30. Apple Blossom; 31. Pale Cinnamon; 32. Pale Blue; 33. Rose; 34. Poppy Blue; 35. Purple; 36. Dark Blue, Wallflower-leaved.

Distant flowered.—43. Carmine; 44. Giant Scarlet; 45. Flesh-coloured; 46. Dark Carmine; 47. Dark Blue; 48. White; 49. Light Blue; 50. Red Gray; 51. Chocolate; 52. Deep Violet.

LATE FLOWERING, OR AUTUMN, GERMAN STOCKS, blooming from August to November.—*Close flowered.*—53. Violet; 54. Copper, Wallflower-leaved; 55. Dark Copper; 56. Light Copper; 57. Carmine, with Wallflower-leaf; 58. Violet, with Wallflower-leaf; 59. Dark Maroon; 60. Flesh-coloured; 61. Dark Blue; 62. Peach Blossom; 63. Dark Brick-coloured; 64. Pale Brick-coloured; 65. Bright Carmine; 66. Carmine; 67. White.

Distant flowered.—68. Red Gray; 69. Dark Blue; 70. Dark Brown; 71. Dark Carmine; 72. Pale Blue; 73. Dark Violet; 74. Red Grey; 75. White; 76. Red Brown; 77. Copper-coloured; 78. Cinnamon.

GERMAN WINTER STOCK.—This class of Stocks is similar to the *English Brompton Stocks.*—79. Pale Rose; 80. Carmine; 81. Dark Blue; 82. Pale Blue; 83. White; 84. Brick-colour; 85. White Wallflower; 86. Violet Blue; 87. Giant Scarlet; 88. Peach-colour.

ZINNIAS.—89. White; 90. Dark Scarlet; 91. Yellow; 92. Dark Purple; 93. Bright Scarlet; 94. Golden; 95. Bright Purple; 96. Violet; 97. Red; 98. Rose; 99. Buff; 100. Crimson.

I purpose to forward, for insertion in the next Number, a descriptive list of the most showy greenhouse plants which will flourish in beds in the open air during summer, and afterwards, a similar list of perennial border plants.

CULTURE OF CHOROZEMAS.

BY THE MANAGER OF A FLORAL ESTABLISHMENT.

THIS is a lovely and beautiful genus, profuse in blooming, striking in its varied colours, and, like all the pea-shaped class of flowers, is highly interesting. Some years' practical attention in propagating and general management of an extensive stock, enables me to give in detail some useful information thereupon.

Cuttings should be taken of the young shoots when about an inch and a half long, cutting them off entire, with a small portion of the old stem producing them. This old portion usually sends forth roots freely, inserted in the usual sand used, and covered with a bell glass, plunged in a gentle bottom heat. When well rooted, they are potted off singly into 60-sized pots, a free drainage, and in a compost of one-half *turfy* peat, one-quarter of old decomposed cow-dung, and the remaining quarter of white sand, pieces of charcoal, charcoal dust, bits of pots or sand-stone, &c. The plants are placed for about ten days in a close frame, then removed to a situation in the greenhouse, &c., placed near the glass or in a draught of wind. The plants are repotted in proportionate-sized pots, as required, always using the materials of compost in a chopped or rough state. Plants that are arrived at a moderate size, of the large-leaved kinds, require more water than the others, and to them I give occasionally manure water. I never expose the plants to the open air, as is done to greenhouse stock in general, but retain them in the house uniformly, also shading them from the sun, which, when powerful upon them, is very injurious. At the approach of autumn less water is supplied, as it is an essential to success.

It is an essential to success, as the *autumn* approaches, gradually to give less water, for if an abundance were continued when the general growth had ceased, it would tend to destroy the delicate fibrous roots, and speedily, often suddenly, the entire plant. Especial attention to this matter in their management should be given. Those kinds which grow thin of shoots and erect habit, and somewhat liable to become naked, may readily be kept bushy by pinching off the ends of the shoots which induces the production of laterals. By the above management, vigorous, never-failing, healthy plants are maintained.

ROSES OF SPECIES:

REQUIRED VARIATIONS IN THEIR CULTURE.

BY ROSA.

In the many excellent observations on the cultivation of the rose, which have appeared in the Cabinet and other works on horticulture, I have frequently observed that the rules, (though most excellent in themselves, as applied to many species of roses, have usually been too general, and have proceeded on the principle of considering most species as requiring the same modes of treatment, while the great difference in the habits, nature, places, and manner of growth seem to me to point out important variations in the soil, situation, and mode of cultivation required by many of the different species. I therefore would state some of the differences and places of growth, in a wild state, of some of the species, and the variations that they seem to suggest in the culture. Though plants are greatly altered by culture, yet they generally retain a considerable bias to the soil and situation for which, by nature, they are formed: and it is usually within a certain range only, of what I would call their natural habits, that they are capable of improvement by cultivation.

In taking a cursory view of the difference which there appears to me to be among some of the species of roses, I shall, to make myself better understood, separate the genus into five divisions.

In the first division, place *Rosa spinosissima* and its varieties; the *R. lutea*, *sulphurea* and *cinnamonea*, which, from their slender shoots, small and numerous thorns, and fibrous roots growing very near the surface of the ground, are all, I believe, plants in their wild state growing on heaths and places where there is but little depth of soil, and are surrounded only by plants of a low stature; they would seem, therefore, to require to be planted in an airy situation, and not to need much depth or strength of soil; as in their natural places of growth, they are exposed to the browsing of cattle, and we find them to bear much cutting and shortening of their shoots.

In the second division I include the numerous varieties of Rosa provincialis, centifolia, gallica, and muscosa. The varieties of these species are so numerous, that this division contains the greatest number as well as many of the most beautiful roses; they appear to me to be plants which, judging from their manner of growth, have in their natural situations to contend with high grasses and other strong growing perennial plants; when overpowered by these, they, as it were, remove by sending out roots near the surface of the ground, which, when they reach a more airy spot, throw up suckers, these exhaust the old plant, and form a new one in a better situation; the roots of this division, though less fibrous than those of the first, yet are so much so, and grow so near the surface of the ground, as not to require either a strong or deep soil. It is to the roses of this division that the rules usually given for the cultivation of roses chiefly apply, particularly those for cutting the last year shoots to a few inches in length, and removing the stems when three or four years old.

The third division consists of Rosa villosa rubiginosa, moschæta alba, damascena, and canina: the roses of this division have much stronger roots than the others, and strike much deeper into the earth. The place of their growth in their wild state is among large, strong growing shrubs and trees; they therefore require a much stronger and deeper soil, and a less airy situation than the two former divisions. They do not need, nor bear so much pruning of the shoots; indeed, some of these species are often rendered less productive of flowers for a year or two, by too much cutting; and the main stems of some of them, the R. villosa for example, will send out good blooming shoots for more than half a century, with only a moderate occasional pruning to keep the plant in proper form and bounds.

The fourth division consists of Rosa arvensis, sempervirens, Banksiæ, and multiflora. These roses, in their natural state, trail along the ground, or support themselves by bushes growing near them, they therefore do not require a very airy situation: their roots are strong, but not so strong as some of those of the last division, and therefore seem to require rather a lighter soil; they must be supported or nailed against a wall.

The fifth division consists of Rosa semperflorens and indica. The sudden and rapid way in which these roses send forth their shoots immediately on a change from cold to heat, points them out as growing in their wild state on mountains covered with snow a part of the year, and, like other natives of such places, with rapidity, taking advantage of an interval of warmth to grow, bloom, and ripen their seed.

I shall be highly gratified if any of the foregoing observations should tend to make any of your readers better acquainted with the nature of some of the species of this genus of plants, which certainly consists of the most beautiful, elegant, and lovely flowers in existence, and which in every country, where they will grow, are universally esteemed.

BORONIA SERRULATA.

At a meeting of the Streatham Gardener's Society, Mr. Hale read an excellent paper on the cultivation of this plant. "He observed, that the Boronia serrulata, with its fragrant pink blossoms, was a very valuable plant for drawing rooms, &c. He had had the plant under his care for the last fifteen years, and as the result of his long acquaintance, he was enabled to offer the following remarks:—Cuttings will root freely in a gentle bottom heat, with the assistance of a bell glass; the soil should be rich peat and sand sifted through a fine sieve; when they are rooted, they are to be potted off into three-inch pots, which are well drained with potsherds and turfs; they are then placed in a frame where the temperature averages from 50 to 60 degrees, and are kept shaded from the sun. As soon as their roots have reached the sides of the pots, they should be removed to a cold frame, admitting no air for the first fortnight, and shading from the mid-day sun; water must be used very sparingly for a week or two. To grow large plants, commence shifting as early as possible in the month of February or March, according to the strength of the plants. The peat should be used as coarse as the size of the pots will allow, with plenty of sand intermixed. The plants which have been kept for blooming may be shifted as soon as the flowers begin to fall; then place them in a vinery or pit for a fortnight, adopting the same precautions as already mentioned; by this time they may be removed to a cold frame, where they are to remain for the next three months. When placed in the greenhouse, care must be taken to stand them in a situation where there is no draught, as they require very little air and water during the winter months. To convince the members that the plants sustain much injury by standing in the draught, if they do not die, Mr. Hale exhibited two plants, one in a green, healthy condition, and the other in a brown state; this latter he attributed to the plant standing near a cracked pane of glass; if left in this state any considerable time, they very seldom recover so as to attain anything like perfection. By strict attention to the treatment recommended, plants may be brought to a great size in a short time. Like many other plants, it has now become greatly neglected, in consequence of continued failures. Mr. Claridge could bear testimony to the high state of cultivation of Mr. Hale's Boronias, and also to his continued success in striking cuttings for several years past. Mr. Brown had also seen them propagated with great success by the plan mentioned by Mr. Hale. Mr. Taylor had grown the Boronia for several years, and had flowered them pretty well, but not equal to Mr. Hale's plants, neither in the colour of the foliage nor in the size of the plant.

DOUBLE FLOWERS.

What mistaken means are employed for obtaining these, and how many erroneous circumstances are, up to this very day, says the *Revue Horticole*, admitted to explain the cause of doubleness in certain flowers! Thus, for example, many gardeners pretend that to obtain double Brompton Stocks, you must gather the seeds exclusively from those flowers which are the most double. What influence can these flowers have when entirely deprived of all the organs of generation? None whatever. To explain this phenomenon, we must make practice agree with theory. Every gardener who sows seed, wishes to obtain plants with double flowers, so as to obtain blossoms which produce the greatest effect. Every double plant is a monstrous vegetable. To produce this anomaly, we must attack the principle of its creation, that is to say the seed. This being granted, let us examine in what way these seeds ought to be treated. If, after having gathered the seeds of Malcomia annua, or Ten-weeks Stock, we sow them immediately afterwards, the greatest number of the seedlings will produce single flowers, whilst, on the contrary, if we preserve these same seeds for three or four years, and then sow them, we shall find double flowers upon nearly all the plants. To explain this phenomenon, we say, that in keeping a seed for several years, we fatigue it and weaken it. Then, when we place it in a suitable soil, we change its natural state, and from a wild plant make it a cultivated one. What proves our position is, that plants, in a wild state, shedding their seeds naturally, and sowing them as soon as they fall to the ground, yet in a long succession of time scarcely ever produce plants with double flowers. We think then, after what we have said, that whenever a gardener wishes to obtain double flowers, he ought not to sow the seeds till after having kept them for as long a time as possible. This practice ought to be observed with all plants that we wish should produce double flowers, for all varieties of the Brompton Stocks, Pinks, &c. As to Brompton Stocks, Ten-week Stocks, and others of the same kind, there is no doubt that to flower them well they should be sown in autumn in well-worked soil, taken up when the cold weather comes, and kept under a frame during the winter. In the spring they may be planted out again, when they will flower magnificently, and yield an abundant harvest of seeds. If you have not a frame at your disposal, you may obtain the same result, by sowing the seeds at the end of February, under a south wall, for example. The principles that we admitted above are just as applicable to Melons and all plants of that family. We admit, like many other observers, that Melon plants obtained from seeds the preceding year ought to produce, and do produce, really very vigorous shoots, with much foliage; but very few fruitful flowers appear on such plants, whilst, on the other hand, when we sow old seeds, we obtain an abundance of very large fruit. In fact, in all varieties of the Melon the seeds should always be kept from three to eight years before being sown, if we would obtain fine fruit, and plenty of it.

PROPAGATION OF THE CALAMPELUS SCABER

(ECREMOCARPUS).

BY LUCY.

In the month of January, place an old plant in a vinery or hot bed, so as to get it to break; when the shoots are about three inches long take them off with a sharp knife, being careful to take a small piece of the old bark with the cuttings, and plant them in light vegetable mould and sand under glasses; they will quickly strike root, and in a month will be fit for potting; the composition should consist of equal parts of rotten dung, leaf-mould, and loam. Plants raised this way from cuttings will flower well the first year, when those raised from seed will not blossom till the second year. In raising from seed it should be sown as soon as ripe, and placed in the green-house; the plants will be fit for potting in the spring.

DISCOVERY OF PROCESS TO PRESERVE FLOWERS.

Among the recent scientific discoveries, we are informed that Dr. Fascale, a chemist at Westeras, in Sweden, has announced to the Academy of Sciences at Stockholm his discovery of a process for preserving flowers in their natural condition. He sent, it is stated, some Roses which he assures the Academy were prepared by him in 1844.

CLEMATIS SIEBOLDII (Bicolor).

BY AN EXHIBITOR.

Although this beautiful flowering plant will grow tolerably freely in the open air in this country, yet when it blooms they are comparatively small, and nearly entirely white; but when grown in a warm pit frame, the green-house, or conservatory, the flowers are much larger, have a delicate tint of sulphur over the white and the almost black centre, producing a handsome contrast, and rendering it very ornamental. It does equally well trained against a pillar, trellis, or grown in a pot and coiled round a wire framework. I have had 360 flowers upon a plant at one time. My mode of treating is the following. The plant always flourishes best when raised from layers, or cuttings, not grafted upon the root of another kind.

In *December* I pot, or re-pot, the plant, giving it a liberal drainage, over which is laid some pieces of chopped turf. The plant is divested of its former soil, the roots are coiled around the sides of the pots, and as the compost is filled in they are spread in the compost around the sides; when completed I prune in the branches to about 8 or 10 eyes, and place it in warmth for a week or 10 days, then remove it to a cool pit, till the end of March, when I place it in the green-house, giving it a frequent syringing, &c., and the vigour and beauty it displays is much beyond what I have seen in any other plant.

SLUG GUARD.

To repel the attacks of slugs and snails on plants, it is stated in *Johnson's Gardeners' Almanac* that Mr. Sharp, of Winchester gas-works, employs a simple and effectual remedy by encircling the rim of each pot with a piece of horse-hair rope, partially cut across its strands. The bristles start forward and present a *chevaux-de-frieze* which neither slugs nor snails can surmount. It is very durable, may be used to protect any plant, and is rather ornamental.

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

As a matter of course a Floricultural Calendar for this month must to a certain extent be acted upon as it relates to open air operations, coal-pits, frames, &c., only as the weather is favourable for the operations detailed. If the weather continues severe sufficient protection must be given, as during last month, to all tender things. Any alterations of ground or planting trees should be completed early as possible; and the collection of soils, manures, &c., to form composts, be laid on heaps—turn former heaps, &c. If there be Rose-trees to plant this season, they ought to be done during the present month, or their growth will be hazardous if deferred to March, and even if they live they do not thrive well during the summer. Give a good top dressing now to established plants of well rotted manure. Prune the hardy kinds. Perennial and biennial border flowers should be divided, if required, planted, &c. Turf may be laid at the end of the month.

Take the first opportunity about the middle of the month, if the weather be dry, to plant *Ranunculuses* and *Anemonies* in the prepared beds, placing them at five inches apart, and an inch and a half deep from the crown to the surface, and if the soil be dry gently press the surface with a flat board. The sharp frosts of this season will have greatly benefited the beds by purifying the soil. *Auriculas* and *Polyanthuses* should have a portion of the old surface soil taken away, and be replaced by a good earthing up of rich compost, this will be required about the last week in the month. *Tulips* having made appearance above the ground will require especial attention, especially in giving secure protection from sudden frost. Bear in mind that on the attention paid to them from this period depends their after success.

The continued frost of last month would not permit much fresh air being admitted to late potted *Carnations* and *Picotees*; on every favourable occasion now, therefore, do not neglect to afford abundance, as it will retard premature growth and materially promote vigour hereafter. Beds of *Pinks*, *Heartsease*, and *autumn planted Ranunculuses* should have particular attention both as to protection from frost, and the stems of the plants being firmly secured, also the surface of the bed lightly stirred up. When strong frost subsides, and the gravel walks are thawed they are generally very light to the depth of a few inches; where the surface gravel requires to be loosened for the purpose of adding to it some new, it is in that thawed state performed very readily, and to do it then saves a great deal of trouble and expense which would be incurred at a more advanced season. Now is the period for making a plan of the flower garden, parterre, &c., and to mark each bed with the kinds required, and then to prepare a stock to furnish accordingly.

IN THE FORCING FRAME.

Sow seeds of the tender annuals as Balsam, Amaranthus, Cockscomb, &c., in pots, and the half hardy kinds as Asters, Stocks, &c., either in pots or upon a bed of soil, &c. When sown in pots do not water the surface at the time, but after a few days if the soil be dry a gentle sprinkling may be given, and afterwards, till the plants are up, great care must be taken to keep it moist, for when once softened, if the seeds become dry destruction soon follows. Gardenias should be forced now, as also other similar plants. (See list in Stove department.)

Cuttings of Hemimeris, Salvias, Heliotropes, Geraniums, Lotus, Anagallis, and such like plants for the open beds in summer should immediately be struck, or the plants will be too weak to answer the purpose. If parts of cuttings were put off in autumn they should now be potted off singly into small pots, they will then be well established by turning out time; any long ones amongst them should be stopped to induce laterals and make bushy plants.

Dahlia roots should be immediately put to force; if increase is requisite, take off the shoots when about four inches long.

Dahlia seed should be sown in pots, and only just covered. Lobelias, too, should be potted singly at the close of the month to have them vigorous by turning out time. Boxes and pots of Mignonette for succession should be sown. Achimenes, Gesnerias, Gloxinias, &c., should be introduced to incite their immediate growth, and as soon as the plants have pushed, pot them, singly or otherwise, as desirable. Amaryllis, &c., may be excited in like manner. Hyacinths, &c., approaching bloom, must be placed in an airy, light situation, and to those in glasses give a change of water every three or four days. At the closing part of the month pot singly Tigridia pavonia, and T. conchiflora into small pots. Sow immediately in pots seed of the Chinese Primrose, and as soon as the plants are fit to pot off do so in a rich compost; keep them in heat for a short time, and never water them over-head, as they are liable to be rotted off by its remaining in the centre; care, too, is necessary not to give too much at the roots, for if kept *wet* they soon become sickly. The plants properly treated will bloom fine the same season. The fringed flowered kinds are the best.

IN THE COLD FRAME, GREENHOUSE, &c.

Continue to preserve all inmates of the *cold frame* in as quiescent state as possible. In all cases when very severe weather continues for some time, it is necessary to keep the sashes close, and perhaps to retain during day as well as night the matted covering, much caution is therefore required to avoid destruction by damp. Admit air in abundance whenever the weather permits, and occasionally, when a mild day presents, clean the pit throughout, stirring the surface a little, also scrupulously remove all dead leaves and branches from the plants. Carefully and sparingly give water now and then as absolutely required only. By observing these simple rules much damp and frost too is easily withstood.

In the *Greenhouse*, &c.—All air, in dry, favourable weather, must be admitted so as just to keep frost out. If damp a gentle fire may be applied when air cannot be admitted. Pelargoniums to be superb specimens should be re-potted into their blooming pots. (Read the several articles on their culture in previous volumes). The surface soil in all pots should be stirred up, it tends to health. Epacris, Correas, Coronillas, Acacias, Cinerarias, and other plants will now be coming into bloom, water seldom as possible, but when given, let there be as much as will moisten *all* the soil. Ericas will still generally be inactive, therefore give but little water as required, and recollect their proper situation is in the most airy part of the house. Camellias, too, should occupy an airy part, and the greatest care taken to keep the soil in an equally moistened medium state, using water of a temperature equal to that of the house; if these points are neglected it is likely the flower buds will drop. Alstrœmerias, Lilium speciosum, and others should be re-potted. Any young plants which have filled their pots with roots should be potted into larger as they require from time to time. If a syringing of the plants over head be really necessary, let it be done in the morning of a day which is likely to be fine, and air be admitted fully.

IN THE STOVE.

Old plants of Fuchsia corymbiflora now gently pushed on will come finely into bloom by the first week in May, or if season be fine, earlier. Exotic seeds should now be sown (see articles in former volumes). Successive introductions of plants forced must be brought in, as Roses, Lilacs, Azalea, Acacia, Heliotropes, Correa, Coronilla, Cineraria, Sweet Violets, Cactus, Cyclamen, Gardenia, Justicia, Eranthemum, Honeysuckle, Pinks, Gesneria zebrina, Nerium, Mignonette, &c., and pots or boxes of Hyacinth, Narcissus, Persian Iris, Crocus, so as to have a constant succession of bloom. (See remarks on Hyacinth in January Calendar). All the plants now enumerated are suited, too, for a warm conservatory, and as that useful appendage is often contiguous to a room they are doubly charming in such a situation at this early season. Orchidaceous plants should be re-potted now, as they may require. Take care that a due proportion of moisture is maintained in the atmosphere, although most of this tribe require to be quite dry at the root during the rest season; yet they still require a somewhat moist atmosphere.

DOUBLE FLOWERING STOCKS:

THEIR PERPETUATION.

BY CLERICUS.

Much has been said and written upon the subject of raising double flowering Stocks, and after pursuing every method that has been recommended, there is unavoidably disappointment in raising from seed. In order to perpetuate the kinds of double Stocks I already possessed, it occurred to me that, as in the case of some other similar plants, I might increase them by striking cuttings; I therefore had a quantity inserted, and nearly every one struck root. As soon as sufficiently rooted I potted them off singly into small pots; and they were well established before winter. I kept them in a dry cold pit-frame, free from damp and frost, and in April planted them out in beds, where they bloomed more abundantly than those which were raised from seed. This process I repeated last year, and continued to the present with equal success.

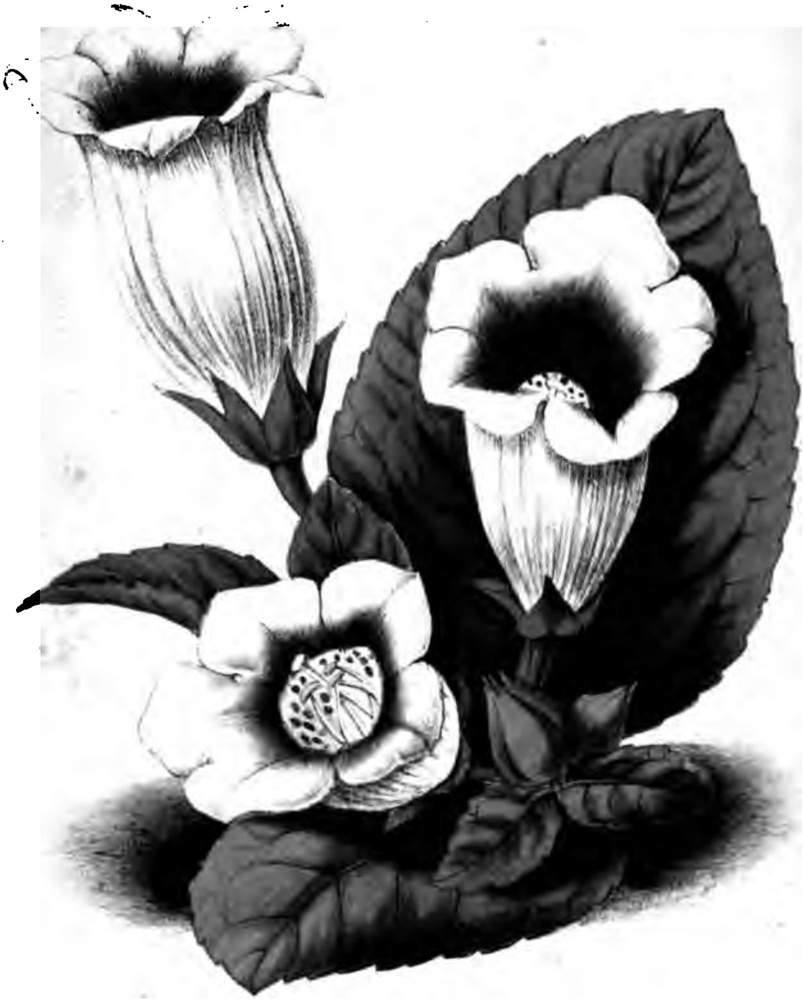
The idea of propagating Stocks from cuttings may at first sight appear tedious or tiresome, but it will not be found so in practice; besides, there are other advantages to be derived from it, which are not so strictly within our reach when propagating from seed, viz., the certainty of commanding groups of this lovely flower, all double, and, the equal certainty of perpetuating any favourite or peculiar variety. I have practised two methods of taking cuttings, and with equal success in striking them; but I much prefer the one to the other, as I find the two methods produce very different plants; that which I consider the best, is to take the cuttings when the plants are in full bloom. On the side-shoots producing the flowers, beneath the existing corymb, another, and frequently two other, shoots are produced; take off those shoots at their lower joint, before they show flower, with a sharp knife cut off the two lower leaves, insert them in pots half filled with any light, rich compost, and treat them as other soft-wooded cuttings.

BRIEF NOTES AND CORRESPONDENCE.

Victoria Regia.—We have directed attention to this magnificent plant, by an extract from the *Botanical Magazine*, amongst our notes on new plants in the present number, referring our readers for further knowledge to the magazine itself. We have since observed, however, a re-issue of the account in a separate and smaller form, so that persons who are not regular subscribers to that publication may easily possess it, as no doubt all those interested will do.

Hydrangeas.—*A. S.*—To change the colour of the flowers, your plants should have received preparatory treatment. Perhaps, however, you may yet turn them blue, if you now and then give them a weak solution of alum; we have known it to succeed.

Botanical Drawings.—*A Student.*—To render these really useful they should accurately represent all the characters. The best method of rendering the pencilling permanent with which we are acquainted is that adopted by Mr. Christie, and detailed in the *Pharmaceutical Journal*, with which perhaps you may not be familiar. It is to "dissolve pale resin in spirit of wine; lay the pencil drawing on its face upon a sheet of clean paper, and brush the back of the drawing with the solution. This penetrates through the paper in a few minutes, and as the spirit evaporates the resin is deposited as a varnish on the drawing. This has the advantage of not cockling the paper, which aqueous solutions will do; and as the brush only passes over the back of the drawing, none of the pencil marks are in any degree removed. This process will not answer with drawings on card, or any other substance too thick to be penetrated by the solution. In this case a weak solution of isinglass may be placed in a shallow dish, the drawing being passed through it so as to wet every part without touching it with a brush."



Gloxinia Fyfiana

FLORICULTURAL CABINET

MARCH, 1847.

ILLUSTRATIONS.

CHAS. LOUIS L'HERITIER, a French author on gardening, conferred the generic title, *Gloxinia*, to commemorate B. P. GLOXIN, of Colmar, a German botanist. The tribe thus distinguished comprises plants of considerable beauty, highly interesting, and when in full bloom particularly showy and ornamental: they are also easy of management, and particularly deserving cultivation wherever practicable.

The very beautiful inhabitant of our hothouses for many years, *G. maculata*, was the first species introduced into this country, and as long ago as 1739. It, like the subsequent species, was discovered in South America. The native habitation being on the margin of dense woods, where the surface soil of such situations is a light leafy mould. An intervening period of seventy-six years occurred before another species was introduced, viz., *G. speciosa* in 1815, afterwards *G. caulescens* in 1820, and *G. hirsuta* in 1824. Subsequently appeared *G. digitaliflora*, foxglove-flowered; *G. tubiflora*, tube-flowered; *G. discolor*, two-coloured leaved; *G. picta*, painted-leaved; and recently some others. This accession of so many diversified and beautiful species soon presented scope for the attempt to raise hybrids, and the result has been successful in producing several highly beautiful and novel varieties. The most singular and distinct of all is the one we now figure, viz.:—

GLOXINIA FYFIANA—MR. FYFE'S GLOXINIA.

Gesneriaceæ. Didynamia Gymnospermia.

It was raised from seed saved in 1844, by Mr. John Fyfe, gardener, at Rothesay in Buteshire. It is supposed the seed was obtained from *G. maxima*, but what that had been impregnated by, it appears, is not known. The form of the flower and its erect position much resembles the lovely spring Gentianella. It bloomed for the first time in 1845, and was exhibited in September at the Dunoon Floricultural Show, and subsequently at other places, where it attracted universal attention and admiration, by its differing so widely from every other kind of Gloxinia, and the flowers being so strikingly beautiful.

Messrs. Drysdale and Co. nurserymen, of Glasgow, purchased the stock of it, and plants may be had of them, or of ourselves as their agent for its sale in England, by the first week in April next. Like the other Gloxinias it blooms very freely, and its profusion of flowers, produced through the summer season, form a delightful ornament for the greenhouse, conservatory, or stove, and give it an especial claim to be grown in every one.

One of the most interesting attentions in floriculture is that of raising new varieties of flowers. The Gloxinia presents an ample range for experiment and additional improvement in this way. The ease with which the impregnation is effected, and seed obtained, also the circumstance of the plants blooming so speedily, alike invite to so pleasing a pursuit.

Very excellent directions, in which we perfectly acquiesce, for the culture of Gloxinias have recently been given (*January Number, p.* 8,) by our respected correspondent, Mr. Wm. Chitty; few remarks are therefore necessary on this occasion on that particular. In a communication, however, we have received from another correspondent, with whom the genus has long been a great favourite, are some interesting particulars, additional to those entertained by Mr. Chitty, which we gladly transcribe.

"I have," says our correspondent, "devoted some attention to raising hybrids, by the impregnation of the most distinct sorts, and have been rewarded with some very handsome varieties. I principally impregnate the flowers which are produced at the early period of the year, by which selection, I obtained well ripened seed in the summer, and thus obtain the advantage of sowing the seeds immediately they are ripe, and the plants form tubers of a size that season, which, without injury, endure the rest period of winter. When the seed is sown as soon as ripe, it more certainly vegetates than if retained till the following spring. I sow the seed in flat pan-pots. I have a free drainage, use a turfy-chopped sandy-peat soil, the surface made even and about a quarter of an inch of silver sand spread over it, upon which I scatter the seed, pressing it gently into the sand and sprinkling over it just as much sand as will cover it out of sight. I place the seed in a hot-bed frame, covering a glass over the pot, and the plants soon appear. When they are strong enough to transplant I pot them off singly into small pots. The kind of compost I use is sandy peat, light loam, and old rotten cow-dung, equal parts, but Mr. Chitty's may perhaps be better than mine; my plants, however, bloom profusely. I replace them in the hot-bed frame, and encourage their growth. About October, I gradually withhold water, and place the pots either in the shed, or cool part of my greenhouse, so as just to preserve them from frost. As soon as signs of returning growth are evinced the second season, I pot the tubers, and treat them similar to my older kinds, and they bloom vigorously that year.

"Any of the kinds that appear likely to be distinct and fine, and which I desire to increase, I do it readily by the following simple processes. By scooping out the leaf with its bud at the base from the parent stem or trunk, and inserting such in white sand, or sandy peat, at the side of a pot, pegging the same securely with a hook-peg as is used in layering, they quickly root and soon make fine plants. None ever fail by this process, and I prefer it to any other; but when I cannot obtain a bud with the leaf, as in the case of a present or two I had of a particular kind where no bud could be had, I have pursued the following method:—A pot was filled up with sandy peat to about an inch from the rim, over it was laid half an inch of white sand, which being settled with watering, I took the leaf, severed through the strong ribs thereof in a few places, and then spread it flat over the face of the sand, the rib side to the sand, and secured it by a few pebbles of gravel and one hooked peg to fasten the stalk. This I placed in the hot-bed frame, covered it with a glass, and from the sides of the cuts made tubers were soon formed and plants obtained. This method succeeds too, but it is not so certain as the other method, and much longer in its results.

" I treat my blooming stock as follows:—Early in February I take one-fourth of my roots, pot them in a compost of equal parts of light loam, sandy peat, leaf mould, and one year old rotten cow-dung. This compost I use in a rough state, adding a free drainage of broken pot and chopped turf. I then place them in a moist stove, near the glass, duly attending to future culture. At the end of each of the three following months I pot an equal portion, treat them as the others, and by this means extend the blooming to autumn.

" When the plants have ceased to bloom I gradually withhold water, so that the tubers may have the proper period of rest. I have the four portions numbered, so that No. 1, planted early in February, is potted first the following season, and the plants become habituated to the time of potting and period of blooming.

" By pursuing the plan above stated, in connection with Mr. Chitty's, one of the most lovely and profuse blooming tribe of plants will most amply repay for the attention given."

We may add, the mode of culture detailed by our correspondents applies uniformly to *G. Fyfiana* and all other kinds, unless we except *G. maculata*, and its closely allied species, *G. pallidiflora*, which, usually flowering at a late period, it is desirable to vary the treatment in order to prolong their bloom. To accomplish this they must be somewhat earlier excited into growth, and as they root rapidly they require repotting twice or more. If placed and retained in a higher temperature, too, than other kinds, they flourish with such increased vigour as amply to reward for any particular attention bestowed.

NOTES ON NEW OR RARE PLANTS.

BEGONIA FUCHSIOIDES—FUCHSIA-LIKE BEGONIA.

Begoniaceæ.—Monœcia Polyandria.

MR. PURDIE discovered this singular and beautiful Begonia on the Ocasia Mountains of New Grenada, and forwarded it to the Royal

Gardens of Kew, where it has bloomed in the stove. It is profuse in elegant, rich deep scarlet drooping flowers.

The plant grows about three feet high, and as it continues in bloom it is very ornamental for several months, for autumn and winter too. It is a pretty and distinct addition to this very interesting family of plants and deserves to be in every collection. Figured in *Bot. Mag.*, 4281.

CALANTHE CURCULIGOIDES—YELLOW-SPIKED CALANTHE.

Orchidaceæ. Gynandria Monandria.

Discovered in the Straits of Malacca, from whence Messrs. Loddiges, of the Hackney Nursery, obtained it. The flowers are produced in a spike about a foot long, they are of a firm waxy nature, and what renders it quite a novelty, is, they are of a bright yellow colour. Figured in *Bot. Reg.*, p. 8.

CHIRITA SINENSIS—CHINESE CHIRITA.

Cyrtandraceæ. Didynamia Angiospermia.

Mr. Fortune sent this plant from China when employed as collector for the London Horticultural Society. Its habit is that of a stemless Gloxinia, the flowers rising about eight inches high, and the blossoms are produced in compound corymbs. Each flower is tube-formed, an inch long, with open mouth divided into five lobes, and the colours purple varied with red, rose, and white. It produces its pretty flowers freely, and well merits cultivation. When grown in the stove and placed near the glass it thrives best, but we find it also to do well in the warm part of a greenhouse.

EPIDENDRUM PLICATUM—THE PLAITED EPIDENDRUM.

Orchidaceæ. Gynandria Monandria.

A native of Cuba, and has recently bloomed with Messrs. Loddiges. The plaited crenelled lip, is very singular; it is a rich crimson colour, as are the petals at the back, but green on the inside, beautifully spotted with crimson; the sepals are green, slightly tinged with crimson. The flowers are produced in a shortish raceme.

EPIDENDRUM PYRIFORME—PEAR-FORMED EPIDENDRUM.

This plant is also a native of Cuba, and has bloomed with Messrs. Loddiges. Each flower is about two inches and a half across. The sepals and petals being of a reddish-yellow colour, and the lip a pale straw, veined with crimson.

ERIOPSIS BILOBA—TWO-LOBED ERIOPSIS.

Orchidaceæ. Gynandria Monandria.

It belongs to the section of Maxillarida. The flowers are produced in a long spike of a rich orange colour. It recently bloomed in the collection of J. J. Blandy, Esq., of Reading, who bought the fine collection of the late Mr. Barker, and this was one of the new things therein.

ERYTHRINA BIDWILLII—MR. BIDWILL'S CORAL TREE.

Leguminosæ. Diadelphia Decandria.

An hybrid sent from Sydney by Mr. Bidwill to the Hon. and Rev. the Dean of Manchester, and has bloomed at Spofforth. *E. herbacea* impregnated by *E. cristagalli*, produced this plant, it is of intermediate habit, both in the growth and flowers, and a valuable acquisition. Its fine spikes of rich light crimson flower are very ornamental.

EXAGONUM PURGA—PURGA, OR TRUE JALAP.

Convolvulaceæ. Pentandria Monogynia.

This plant is indigenous to the Mexican mountains, and has bloomed luxuriantly in the Edinburgh Botanic Garden, cultivated in a cool frame. It is a twiner, extending many feet long, and flowers are of a purplish-red colour, each about two inches across the mouth. It is known in some collections as *Ipomea Jalapa.*

HIBISCUS MOSCHEUTOS—MUSK HIBISCUS.

Malvaceæ. Monadelphia Polyandria.

A hardy herbaceous plant, and an old inhabitant of our gardens, but seldom seen. It is a very ornamental plant, growing about four feet high and blooming in September and October. The flowers are six inches in diameter, of a pretty bluish colour, with a rich crimson eye, and like a large single Hollyhock in shape. In North America, where the plant is a native, it grows on the borders of marshes; in this country it appears to bloom best when cultivated in a pot and placed in a cool frame.

IRIS SETOSA—BRISTLE-TIPPED IRIS.

Iridaceæ. Triandria Monogynia.

It is a hardy herbaceous species, a native of Siberia, grows about two feet high, blooming in the early part of summer. The flowers are of a handsome lilac colour, ornamented with crimson veins. Each flower is about four inches across. It is in the Chiswick Garden.

NIPHÆA ALBO-LINEATA—WHITE-LINED NIPHÆA.

Gesneriaceæ. Didynamia Angiospermia.

The leaves of this plant are much like those of Achimenes picta in size and form, of a rich dark green hue, marked with white lines upon the nerves, and produce a very beautiful effect. The flowers are somewhat small, white in colour, and produced numerously in a terminal corymbous head. It merits a place wherever the Gesneria and Achimenæ are grown.

SMITHIA PURPUREA—PURPLE-FLOWERED SMITHIA.

Leguminosæ. Diadelphia Decandria.

Discovered in Bombay by J. S. Law, Esq. It has bloomed in the Royal Gardens of Kew last October. It is an annual, erect, branching. The foliage is beautifully pinnate, like some of the Mimosæ. The flowers are small, about half an inch across, of a rich purple colour. They are produced in terminal racemes.

BRITISH PLANTS:

WITH OBSERVATIONS ON THEIR CULTURE.

In the January Number of the FLORICULTURAL CABINET, a paper bearing the above title appears from the pen of our esteemed correspondent, W. Johnstone, Esq., Ballikilbeg House, and we are glad that attention has been directed to the subject, for it is an interesting one to the florist. The British Flora is one rich in beauties, yet we find few native gems in the garden parterres, and even little taste appears displayed in the selection of these few; in fact, in many instances, they seem to have been chosen at random without any regard to their suitableness for garden ornament. There are many of our British plants peculiarly well suited for giving gaiety to the flower border, both on account of their intrinsic beauty and neat habit; but they appear to have been entirely overlooked throughout the whole history of floriculture, in the eager desire for foreign novelties. We are by no means ungrateful to those florists who have enriched our gardens with the showy flowers of other climes; only, we regret that the enthusiasm for these, should be the means of excluding our native favourites; we regret that many of the most beautiful floral gems of our own country are allowed to bloom and die uncared for on the mountain side, and on the banks of the murmuring rivulet far from the homes of men; we regret that, in the present far advanced state of floral art, the sentiment expressed by the poet in the following lines, is, in regard to British flowers, as true as that day they flowed from his pen :—

> " Full many a flower is born to blush unseen,
> And waste its sweetness on the desert air."

Yes, many a fair and fragrant flower blooms unseen, and diffuses its delicious fragrance unfelt, while it might be tending to the happiness of mankind; while it might be warming our hearts with its own beauty, as well as by its holy and sacred associations, for, as has been happily sung,—

> " A flower is not a flower alone,
> A thousand sanctities invest it;
> And as they form a radiant zone,
> Around its simple beauty thrown,
> Their magic tints become its own,
> As if their spirits had possess'd it."

And this sentiment of the poet is peculiarly applicable to the children of our own woods and wilds, for many of them are invested with the sweetest and most endearing associations, the purest thoughts and the holiest feelings.

It is presumed unnecessary here to urge the beauty of our native wildlings; that has never been disputed. On the contrary we find them extolled and eulogised alike by botanist, florist, and poet, more than ever were the productions of tropical climes. And we sincerely hope that amateurs, and not amateurs alone, but likewise gardeners, will take up in real earnest the cause of the neglected native gems, and transfer many of them from their woodland homes to the garden border and there cultivate them with care and assiduity.

Mr. Johnstone hopes the ladies, who take a delight in the floral art, may be induced to effect the removal of the sweet wildlings. It would seem somewhat ungallant in us not likewise to invite the ladies to take an active part, and we would solicit them to do so. But we bear in mind that fair fingers are ill fitted for tearing up roots, and that fashionable slippers are somewhat unsuitable for scrambling up rocky heights and rugged hills. And we hope that considerations of that kind may induce the hardier sex to join heart and hand in the movement. Being ready to do our part, we propose in this and succeeding papers to analyse the British Flora, and see what species really deserve the attention of the florist, and to give such hints as may occur to us on the system of cultivation likely to prove most successful for the respective species; and thus to present our readers with a manual for the guidance in the good cause. It is not our intention to comprehend in our list all the beautiful British plants; but only those which seem peculiarly eligible as objects for garden ornament. It is a fact very well known, that many plants which have a most beautiful appearance when growing in their natural situations, lose much of their beauty when cultivated in the garden; nay, often cease to be objects of admiration. It is likewise a known fact, that many plants, from the peculiarity of their habits, are very difficult of cultivation, and some cannot indeed be grown at all in ordinary gardens. With the plants of neither of these classes do we propose to deal. We intend to treat of those only which, from their great beauty and neat habit, appear fully deserving a place in the flower-garden, and, from the nature of the soil and situation in which they generally grow, and their geographical and local distribution, seem likely to be cultivated with success.

1. **Anemone nemorosa**, or *Wood Anemone*. This lovely vernal flower must be known to all those of our readers who indulge in occasional wanderings in the woods and shady dells, for in such situations it raises its beautifully delicate blossoms at a season when no other wood flower appears, and seems to tell us that it will soon be followed by the sweet Primrose and Cowslip. It is a plant quite easy of cultivation, for we have seen it cultivated, although we believe it to be a *rara avis* in gardens. The intrinsic beauty and graceful habit of this flower render it well deserving of a place in every flower-garden; but it is rendered even much more valuable to the florist from the circumstance of its flowering at a season when flowers are scarce, and when there is little life in the borders, it fills up the gap betwixt the season of the Snowdrop and Crocus, and the Primrose and Auricula. It has a tuberous root, somewhat similar to that of the common garden Anemone, and the root may be removed from the woodland to the garden border at almost any season. The best season for removal is the autumn, when in a state of comparative rest: but it is somewhat difficult to find at that season in consequence of the plant not being in flower and covered by the luxuriant herbage around. Although disadvantages attend the transplanting of the plant in the spring, when in flower, still we would recommend that season, for then it is easily found, and there is, at that time, no chance of any other plant being mistaken for it. It should be planted in light, not over-rich soil, and, if possible, in a shady border. From its dwarf habit it should occupy

a situation in the front or lowest row of plants in the border, and treated in a way much similar to the single Anemone, and disturbed at no time except during the season of rest (the autumn and early part of winter), when the roots may be taken up and transplanted where required.

2. **ANEMONE PULSATILLA**, or *Pasque-flower Anemone.* This is a very handsome species, although a rare plant, and consequently difficult to be procured. We do not fear but it would succeed equally well with *A. nemorosa* under similar treatment as we have recommended for that plant.

3. **MECONOPSIS CAMBRICA.** This is a very beautiful plant, having bright yellow blossoms. In some places it bears the vernacular name of "Yellow Tulip," and in others that of "Welsh Poppy," although it belongs to neither of the genera of *Tulipa* or *Papaver;* it is however nearly allied to the latter genus. Being a very rare plant it will be difficult to be procured; but those living in the vicinage of any one of its few localities in this country should attempt to introduce it into their gardens. It grows (in its wild state) in rocky, shady, and moist places, and the florist should be guided by this fact, in its cultivation. It is perhaps probable that it may not succeed well in the exposed flower border; but it really deserves a trial from those who may get handily in possession of plants of it. It should be planted in a shady situation, and, if possible, in a border lower than the surrounding ground, so that it may have abundance of moisture. If any reader succeeds in its cultivation we shall be very glad to hear of the fact.

4. **EROPHILA VULGARIS** (*Synonyme:* Draba verna), or *Common Whitlow grass.* This is a lovely little annual plant, which, in spring, ornaments old walls and dry banks and bare rocky places, with its beautiful white flowers. It is by no means a rare plant, and its seeds may be gathered abundantly in the situations it frequents if looked for in the months of May or June. It should be sown in the autumn in small masses throughout the flower borders, and it will reward the florist with a profusion of bloom throughout the ensuing spring. We have never seen it cultivated, nor does it appear in any seed list which we have perused; but we think there can be no fear of it succeeding well if a dry situation is secured for it. It is peculiarly well adapted (from its neat habit, and the situations in which it generally grows) for ornamenting an artificial rockwork.

5. **CHEIRANTHUS CHEIRI**, or *Wild Wallflower.* This is the type of our common garden Wallflower, which, however, cultivation has rendered a very distinct variety. The common wild plant is very beautiful, and should be cultivated for contrast. Its flowers are of a rich though light yellow, and it is well adapted for large rockeries. It would be superfluous to offer remarks on its culture, as it should be treated in every way similar to the common garden sort. Its seeds may be easily procured, as it grows abundantly on all ruins and dry rocky places.

6. **TROLLIUS EUROPÆUS**, or *Mountain Globe Flower.* This is a noble flower, and well deserves the attention of the florist, although it seems to have hitherto met with his neglect; its large globular golden yellow blossoms would form a handsome ornament in the garden. The

plant grows wild in moist hilly pastures and morasses in the north of England, and of Ireland, and throughout Wales and Scotland; but can by no means be reckoned common. It is a perennial, and will succeed well in the garden with a little care. It should be removed in the spring and planted in a sunny but not very dry situation, and in soil with which peat has been liberally mixed, and kept well watered until fairly established. It grows pretty tall, and thus requires to be placed in a back row in the border; at least where the plants are arranged according to their respective heights. This plant will well repay a little care and attention.

7. DROSERA ROTUNDIFOLIA, or *Round-leaved Sundew.* This is a very lovely and a very interesting little plant. The flower is small, and by no means showy; but the orbicular leaves of the plant are covered with red glandular hairs, each of which bears on its summit a little drop of a viscid and pellucid fluid, making the leaves appear as if covered with dew-drops, and giving the plant a very beautiful appearance. The viscid fluid exuded from the glands retain insects which chance to light on the leaves. This plant is not suitable for cultivation in the flower border; but should be grown in a small pot plunged in light earth in a cool frame facing the east, so that the plant may not be exposed to the drying influence of the noonday sun. It should be planted in peaty soil and attended well as to watering. *Drosera longifolia* and *D. Anglica* will thrive well under the same treatment; and a small frame devoted exclusively to the cultivation of the three species would form an attractive object.

THE RANUNCULUS,

HOW TO GROW IT.*

It is acknowledged by all that one of the most beautiful scenes which the garden presents is a well cultivated collection of Ranunculuses in full bloom. To grow them well, however, is often a matter of some difficulty, and although much excellent information has appeared in our own and other publications on the subject, we are always glad to receive the details of additional experience. A very neat and cheap treatise of 28 pages has just appeared, bearing the title at the head of this notice, to which we give our entire commendation. Its authors are Messrs. Tyso and Son, the celebrated Ranunculus growers of Wallingford, and we know of no one to whom we could refer, better qualified to afford practical information. Cultivators will do well to avail themselves of it, as it contains all the directions necessary, conveyed in a concise and explicit manner. One short extract will show its style.

"The foundation of all good culture is the adaptation of the compost to the natural habitat of the plant. Experience teaches that the Ranunculus delights in a rich hazelly loam, as the top spot of a pasture, of rather heavy and tenacious, not clayey, qualities, with the turf, and lay it in a ridge some months and turn it two or three times before use. A soil from a pasture abounding with, and luxuriantly sustaining, the British species of Ranunculus, or Butter-cups, has also been found congenial to the Asiatic species. Decayed stable and cow dung, in equal quantities, constituting together about one-third, added to two-thirds of loam, will, when mixed and thoroughly incorporated, form a compost for the main depth of the bed; reserving a portion of loam sufficient to make a top layer of soil two inches deep, to which about half the above stated proportions of well decomposed manure may be added. It is of importance that the tubers should not be placed in contact with *fresh* manure, as it engenders disease in the roots, and consequent injury to the plants."

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* "The Ranunculus, how to Grow it; or, Practical Instructions in the Cultivation of this favourite Florist's flower, being the result of many years' experience." By TYSO and SON, Florists, Wallingford. Jackson and Walford, St. Paul's Church Yard, London; or may be had of the Authors.

CULTURE OF THE TUBEROSE

(POLIANTHES TUBEROSA).

BY AMICUS.

OBSERVING a correspondent requests information on the culture of the Tuberose, and having grown them magnificent specimens, I forward the following, which I trust will be found useful to the inquirer.

Bulbs of the Tuberose are annually imported from Italy, where they are grown extensively for exportation, as Hyacinths are in Holland. As they are sold very cheap, I purchase every autumn, having never been able to bloom satisfactorily those bulbs that I had flowered the preceding year.

COMPOST.—Equal parts of well-rotted cow-dung and light sandy turfy loam, not sifted but well chopped or broken, also having a liberal drainage.

POTTING.—I plant them early in November, singly, in small pots, placing the bulb in the soil about two-thirds deep, pouring a little sand around it to save it from being bound.

TREATMENT.—After potting they are placed in the cool part of the greenhouse, and early in February taken into a hot-bed frame of tolerable temperature, at the upper side thereof; here I allow them to remain until they have pushed the main stem to six or eight inches in length. As they push onward from the first, I gradually allow an increase of air, to prevent them being drawn up too rapid and so become weakly. If the pot be filled with roots before the stem attains the height named I repot into a size larger. At the period of growth I mention, I have them placed in a cooler situation in a frame, or warm part of my greenhouse, repot all into pots six inches across, and duly attended to in watering, tying up, &c. I grow specimens four to five feet high, with long spikes of large flowers. Occasionally, I give them liquid manure, which materially contributes to vigour. I find it most essential to success to promote their early growth in a hot-bed frame as described, and being potted in November, they push roots before so removed, and the stems thus shoot up vigorous, much more so than if newly planted in February and at once taken into the hot-bed.

GROWING THEM IN THE OPEN AIR.—I pot, and otherwise promote the growth of the bulbs as before-mentioned, and when the height described, I turn them out of pots into the open ground, having a compost nearly a foot deep, as before described. I have a very sheltered warm situation near my sitting-room, a full south aspect, where they flourish well and afford a most delightful fragrance to the inmates by opening the window. A south aspected border under a wall, or front of a greenhouse, &c., is alike suitable. I find, when growing freely, a liberal supply of water is requisite.

I have usually a few plants plunged in the borders of my pleasure-ground, where the walks are most frequented; the perfume of the flowers extends to a considerable distance and is delightfully agreeable.

MIGNONETTE:

ITS WINTER CULTURE.

FEW flowers, it is observed by Mr. Whiting in the *Journal* of the Horticultural Society, are more esteemed for bouquets in winter and early spring than the sweet-scented Mignonette (Reseda odorata); it is also very useful for the decoration of the drawing-room and conservatory at those seasons of the year. Although the Mignonette is not a delicate plant, yet it is not generally seen in the perfection to which it might be brought by the simple method of culture I am about to describe. To flower at or soon after Christmas the seed should be sown in the beginning of August, in pots of any convenient size. The soil should be good loam, moderately enriched with rotten dung, and kept open by a pretty liberal intermixture with old mortar or lime rubbish. It is essential that the pots be thoroughly drained, and upon the drainage a handful (more or less, according to the size of the pots, of one year old pigeon's dung should be placed. After sowing the seed set the pots where they will not require frequent waterings, too much moisture being extremely injurious to Mignonette; for this reason, therefore, it will be safer to place the pots in a frame or pit, where they may be covered by the lights in rainy weather. As the plants increase in size they should be gradually thinned, ultimately leaving three or five in each pot. The principal point to be attended to now is judicious watering; by this I mean giving water only when the plants really require water, and then in sufficient quantity to moisten the whole of the soil—not dribbling a few drops over the plants to-day to prevent them from being dry to-morrow—a practice too much followed with plants in pots. Pinch off any premature flowers that may appear, keep the pots free from weeds, and far enough asunder to prevent the plants from being crowded, and when they are removed to winter quarters, set them near the glass in an airy situation. A few of the plants might be placed in an intermediate house, or other situation rather warmer than a green-house, to come into bloom a little earlier than the rest. I have recommended the seeds to be sown in the pots, which is the method I prefer; but if more convenient, a sufficient number of self sown plants might be taken up and potted, only a few extras should be put in to allow for casualties, as the Mignonette transplants badly. The best Mignonette I ever saw grow was treated in this way; but as it is not every gardener who can procure pigeon's dung, I may add, that guano will be found an excellent substitute. This admirable fertilizer must, however, be applied in a liquid state, and not before the pots have become well filled with roots, when a small quantity of guano, given at intervals of a week or so, will increase the vigour of the plants in an extraordinary degree. A second crop might be sown in the beginning of September, and managed in the same manner. Single plants will attain a large size in 32 or 24-sized pots, if the main branches are pegged down as they grow, and the flowers are kept pinched off for a time.

CHANGE OF COLOUR IN THE HYDRANGEA.

The transformation of colours in the Hydrangea has long been a subject of peculiar interest. Mr. Kyle, a gardener at Leyton, in the *United Gardeners' Journal*, states that his opinion is, any soil will change Hydrangeas to blue, more or less; that is to say, if it has never been under cultivation, and adds, " I have drawn my opinions from the following facts, than which I must say nothing can better illustrate this freak of nature. My stock of plants were all taken from *one parent*, and they were all rose-coloured when grown in pots. After growing for two successive years, they were turned out into different parts of the flower-garden, which consists of different sorts of soil, and all those that were turned out where the soil was of a fertile nature kept to the original colour, but those that were planted in peat produced blue flowers, and one, that produced them of the finest blue I have ever seen, was planted in a red tenacious clay, mixed with what is termed iron mould. The plant certainly was a little screened from the hot sun, which might add to its colour. The most satisfactory instance of the whole was in the case of a plant that flowered for three or four years after being planted out in the border, and always true to the original colour; but as we had occasion to make a small piece of rock-work close to it, a mound of Epping Forest loam, placed there for the purpose of supporting the rock-work and growing the plants, came in close contact with the stems of the plant. After a year or so, the roots of the Hydrangea worked its way into this loam, and the consequence was that the side of the plant nearest to the rock-work produced blue flowers, while the other side continued to bear them of the original rose colour, and this has occurred for four or five years. Last year I had no flowers, as they were all cut down by the severity of the season. I intend this year growing some of the Hydrangea japonica in peat, to see the effect on that species. I hope that these instances of what seems a mystery to our limited senses, will be of some use in throwing light on this subject. The *whys* and the *wherefores* cannot alter the facts before our eyes. That there is a cause no person can doubt; but I leave this subject for some one more able than myself to grapple with.

THE DOUBLE SWEET VIOLET

(VIOLA ODORATA PLENA).

BY A. N. F. G.

I HAVE noticed articles in a former volume on the culture of the much esteemed Neapolitan Violet, but I do not think the plan recommended, of growing the plants in an open border and transferring them upon a hot-bed just before forcing, a good one; it gives a check to the plants and they do not bloom so freely or near so fine as by the method I have for the last four years adopted. The following is the method I have pursued:—

About the middle of April I place half a yard thickness of faggots, large enough for the sized frame I purpose to place over it; upon these I lay a foot of mulchy dung, and over that a foot of good rotten manure, and lastly, six inches of good, rich, turfy loam and leaf-mould, equal parts, not sifted, but chopped. The materials, of course, at the surface have a due inclination to the sun, &c. I take good stock plants, and plant them at nine inches apart over the entire surface, duly watering them, &c. through the summer, not allowing suckers to be produced beyond three inches from the old plant. Early in October I take off a portion of surface-soil between the plants, replace with a little fresh, put the frame over them, and give every attention to watering and a free admission of air in dry weather. At the end of the month I have a lining of dung and leaves placed to give a slight warmth, and protect the sides of the frame with straw half a yard thick, closely pressed down; and cover at nights with a foot thick of soft hay, and a covering over it of asphalte. By this plan, and giving as much dry air as possible, I avoid the usual objection of injury, by damping off and weakening the plants by a high temperature. My plants bloom in vast profusion from the end of November to April.

SUMMER ROSES:

THEIR CULTIVATION IN POTS.

FOR this purpose, it is observed, in *Rivers's Rose Catalogue*, the best double varieties alone ought to be selected, and that the plants should be worked on stems not more than four inches high. Plants having roots that are fibrous and compact are to be preferred, because they admit of being placed in the centre of the pots. They should be potted late in October, or early in November, in 24-sized or 8-inch pots, in a compost of loam and rotten manure, or loam and leaf mould and manure, in equal quantities; if to a bushel of this compost half a peck of pounded charcoal is added, it will be improved. After potting, they should be placed on slates, and then plunged in sawdust or old tan, so that the surface of the mould in the pots is covered about two inches in depth with the materials used for plunging. A sunny exposed situation is better than under a wall, for when placed near a wall the branches always incline from it, so that the plant, in lieu of being round and compact, as it ought to be, becomes one-sided. In February following they may be pruned in closely, *i. e.*, to within two or three buds of the base of each shoot, and remain plunged during the summer. Additional vigour may be given by removing the sawdust or tan from the surface of the pots in March, and substituting rotten manure. During the summer all suckers must be carefully removed, and in June, July, and August all luxuriant shoots shortened, by pinching off their ends, and superfluous shoots nipped in the bud; so that each plant is made to form a neat compact bush, not too much crowded with shoots. If this is properly attended to, they will scarcely require pruning the following spring, but only a few of the shoots thinned out, *i. e.*, entirely removed. These plants will require abundance of water in dry hot weather in summer, and once a-week in June and July they should be watered with guano water; one pound to twelve gallons of water will be of sufficient strength. If not placed on slates, the pots must be removed once a fortnight, to prevent the roots entering the soil underneath the pots, which will give them much additional vigour: but the check they receive when removed is very injurious; this must, therefore, be carefully guarded against. The above treatment is also applicable to Moss and Provence Roses on their own roots, which, when required for forcing, may at once be removed from the plunging-bed, after having remained there one summer, to the forcing-house; those required for exhibition only may also remain there till near the blooming season, when, if it is wished to retard them, they may be placed under a north wall, if to accelerate, they may be removed to the greenhouse, or to any pit or frame under glass.

LILY OF THE VALLEY.

This plant does not generally succeed well when grown in pots, and removals for forcing injures it. We have found it to do admirably as follows:—We had three small beds of the Lily of the Valley, of the size of a one light frame, and over one bed the frame was placed early in October. About a month afterwards a tolerable sized trench was made all round the frame, and it was filled up with warm fermenting stable manure and a wood covering, sloping from the frame over the trench similar to one side of a house roof, which kept the dung from being affected by heavy rains, &c., or cold atmosphere. This lining requires forking over, or renewing once or more. With the usual attention of air, water, and protection, the plants succeeded admirably. One bed only forced each year.

GRASS LAWNS.

Those who are desirous to obtain a nice clean lawn, without weeds, would find the most effectual remedy to destroy them, and Plantains in particular, is, when the sun shines bright and strong to put a pinch of salt on the heart of the plants; they shrivel in a few hours; but if applied in a moist day it fails.

TRANSPLANTING SHRUBS.

A CORRESPONDENT in the *Gardeners' Chronicle* observes: "After all that has been said about spring planting of evergreens, or even mid-winter, I am persuaded that no part of the year can equal the autumn; say from the middle of October until the end of November. I have moved hundreds of large evergreens, at all periods within the last twenty years, and I have invariably realised the greatest amount of success by autumn planting. Much, however, depends on the character of the soil, as well as on the mode in which the operation is conducted. Some persons advocate 'puddle planting;' but on what principles I never could discover. Why not 'puddle potting?' Certainly it is better to puddle a large specimen than to totally neglect it in regard to moisture. My practice is this:—to open a hole much larger than the ball of earth or volume of roots about to be introduced, taking care not to make the hole any deeper in general than the surface-soil extends; then to saturate the subsoil with water, and next to pulverize the soil thoroughly intended for filling in round the roots. After this is completed, I invariably rake together a body of tree leaves (if at hand), weeds, sticks, &c., and throw three or four inches (sometimes a foot), in the bottom of the hole, to set the ball or roots on, putting little or no soil beneath the tree. The tree being carefully removed—not a fibre suffered to dry, if possible, during the operation—is placed on the leaves, and the process of filling up commences. I invariably mix decayed vegetable matter with the common soil; this is sometimes obtained on the spot by raking or paring the surface of the ground contiguous. The soil being in a mellow state, is slightly trod as the filling proceeds; and when filled level with the ball, or rather above it, the whole receives a thorough watering, using several cans of water at slight intervals. The next business, and a most important affair, is to thoroughly shake the tree, to prevent wind-waving. When this is completed, a thick mulching of half rotten manure or leaves will finish the process. Such trees should have one thorough soaking of water in the early part of April; afterwards they may be safely left to themselves."

COLOURS IN FLOWERS.

BY X. Y.

THE following observations on the cause of the variety and vividness of colours in flowers, may be read with interest.

The petals of flowers do not owe their beauty to the colour that paints them; for that, when drawn off, is dull and dead; neither do they owe their brilliant tints to the skin that covers them. Their lovely appearance is derived chiefly from the bubbles of water which compose their pabulum. Receiving the sun's rays, they are enlivened and brightened by reflection and refraction from those drops of water, and from that spot or point of light being seen in every bubble, and striking to the focus underneath. By these means the whole flower would at times be one blaze of light, had not nature, to soften the same, covered the petal with an upper and an under skin, which curtails their diamond-like rays, and leaves them instead a lightness and beauty unequalled by the most exquisite art of the painter.

In order to prove that bubbles of water are the true cause of the beauty which flowers transmit, either in vivid flashes or tender tints, to the human retina, we have only to take the dullest colour that was ever mixed or painted, and filling a small glass bubble with water, let the rays of the sun fall through it on the said colour, it will become the brightest and most beautiful imaginable, and exactly resemble the tint of flowers. The moist petal is so filled with water, that it only excites our astonishment how such a thin gauze-like matter can contain such a quantity of liquor, and yet the flower reposes on the hand without wetting it.

To show, however, that some of our flowers may owe their beauty to other contrivances besides pabula filled with water, we may instance a common one which adorns our fields, viz., the ranunculus or buttercup. The petals of this very pretty wild flower appear to be varnished, but, on examination, we find that this is owing to a white powder resembling magnesia which lies between the pabulum and the upper skin. " To try the effect," says Mrs. Ibbetson, whose experiments on the physiology of plants have placed her in the first rank of natural philosophers, " I got a quantity of extremely small glass bubbles containing water blown for me, and I placed them in a petal, in rows; although infinitely larger, yet they appeared to be a petal greatly magnified. I covered them with a piece of gauze, painted so as to resemble a flower, and truly did it imitate the sort of brightness and brilliancy which it was intended to represent.

ON DRYING SPECIMENS OF FLOWERS.

BY G. GREGSON.

To admire and produce living specimens of flowers has been a favourite pursuit of mine from childhood, and I have less enjoyed the pleasures arising from collecting, preparing, and preserving dried specimens, which I have done to the extent of above four thousands. And on winters' cold days and evenings I have hundreds of times had a most delightful treat to look over, and admire, my lovely treasures.

With a view to encourage the pleasing pursuit in others, I herewith transmit the particulars of my method of procedure for insertion in the CABINET.

I always gather my specimens when dry, whether in doors or out. The latter, when the sun has exhaled the dew from them, and when the flowers are in as perfect a state of full bloom as possible. I provide a suitable portion of flannel, of the finest quality for small specimens, and a somewhat coarser for vigorous ones. I have them cut into a suitable size for the press. I find flannel to be very superior to paper, as has been customary to use; it absorbs the moisture better, and specimens retain their colours much more intense. In placing the specimens upon the flannel, I lay a few sheets of common blot paper upon the press board, then a piece of flannel, over which I place a few sheets of blot paper. Having adjusted the boards I fix them in the press.

and screw it down to a rather gentle pressure for about three days. (I have the press in a dry room.) I then dry the paper, regulate any derangement in form of the specimens, and replace them in the press and give it a tighter pressure. In a few days I again dry the paper and flannel, and by that time most kinds are properly dried; except the succulent tribe, which require a longer time, and in preparation a less degree of pressure, or the colours will be changed. Before I place them in the Herbarium, I take a camel-hair brush and wash them wholly over both sides with a solution of one pint of spirits of wine, and two drachms of corrosive sublimate, to which I add a small piece of bruised camphor. This preserves them from injury by the moth, &c. After they are dried I secure them in their assigned places with gum-water and strips of the edges of postage stamp sheets.

CAMPANULA PYRAMIDALIS.

At a meeting of the Croydon Gardeners' Society, Mr. Clarke contributed some remarks upon the cultivation of the Chimney Campanula (*Campanula Pyramidalis*), which he considered to have been much neglected, from the frequent introduction of new plants, in many instances much inferior to old ones of the same family; and as a means of aiding its re-admission to the green-house, said: "My method of growing this plant is, to sow the seed in March on a slight hot-bed; when they have made two or three leaves, pot them off into three-inch pots, and place them in a close frame till they have made growth, then harden them off by degrees, and they will have filled their pots by May. Prepare a good rich piece of ground in an airy situation, and plant them out 18 inches apart; let them remain till the following March, by which time they will have made good growth; take them up with good balls of earth adhering to them, and pot them in 15-inch pots, using the following compost:—equal parts of well decomposed horse-dung, turfy loam, and leaf-mould, with a portion of silver sand, and good drainage. Place them in a frame or pit, which keep closed until they have made growth, shortly after which they will open their flower stems; as they advance keep them as close to the glass as possible, admitting a large portion of air through the day. As the spring advances, frequently syringe them, closing the pit with a humid atmosphere in the afternoon. When their flower stems have attained too great a height for the pit or frame, remove them to the green-house or conservatory, placing them where they can receive a large portion of air. By giving this old plant the treatment here detailed, it will produce flower stems measuring from 10 to 12 feet high. I am not acquainted with any plant more easy of being cultivated to perfection, or more useful for halls, verandahs, &c., when thus cultivated, as from the substance of its flowers it is capable of keeping in flower much longer, and can endure many situations which the majority of flowers cannot. I have seen it trained to fan-shaped frames, and in the pleasant summer months, when fire is not required, placed in front of the grate, and hence, as I presume, its name, Chimney Campanula."—Mr. Agate said he could not flower the plant to his satisfaction until he turned it out of the pot into some good soil for a few months early in the season. With one in particular he had been highly successful: when it showed blooming stems he took it up and put it in a large pot; it produced eleven fine spikes of flowers, and a more splendid plant could not be desired.

WINTER PROTECTION OF PLANTS.

BY P.

The enthusiastic amateur will probably find a difficulty in stowing away the numerous plants which have been raised from seeds or cuttings since the spring, and I will therefore describe to him some cheap and efficient pits, which I observed in a country nursery a few weeks ago. The walls are built of peat turf nicely cut from a common, much in the same manner as those which are used for burning, but of course considerably larger. In building, the walls should be made to slope outwards a little, and should be well filled in behind with solid earth; the inside can then be cut neatly with a sharp instrument, and a most excellent wall will thus be formed. If any of the readers of the CABINET have ever visited the Military College at Sandhurst, they will have observed the same thing done on a large scale, in the formation of the various batteries for exercising the students. After the walls have been built, all that is necessary is, to drive down some strong wooden posts along the back and front, on which the sill and rafters rest, as well as upon the turf wall. If at any time the turf sinks, these support the sill and the rafters, and by pushing in a little turf below the former, the vacancy will be filled up. Such pits will last for many years, and, when covered with good sashes, are dry, and much warmer than even those which are built of brick and mortar; and, the ground at the back and front being nearly level with the glass, the whole are very easily covered with dry straw or litter, when such protection is required in winter. The amateur who lives on the confines of a heath country will therefore see, that he has the means of erecting, at a trifling expense, a place in which he will be enabled to keep such things as Pentstemons, Calceolarias, Verbenas, and even, in mild winters, Pelargoniums, for turning out into the flower-beds in summer. Where litter would be objectionable, a small hot-water apparatus could be introduced, having a two-inch pipe carried along the front, and returned again into the boiler. Of course this would add considerably to the expense; but then all kinds of greenhouse plants could be kept in the greatest safety.

TO DESTROY THE WIRE-WORM.

BY A. Z.

In a recent Number a correspondent desired to know the most efficient means of getting rid of wire-worms, and stated that he read somewhere that the sowing of Mustard-seed effected the object completely. The Article to which he alludes is, probably, to be found in "Loudon's

Gardeners' Magazine." The quotation is as follows:—"I have demonstrated to my own satisfaction that the wire-worm may be prevented by sowing the ground previously with white Mustard-seed. On a field of 50 acres of fallow, half an acre was sown with white Mustard-seed. The field was much subject to wire-worm, and when it was laid down with Wheat after fallow, it suffered much, excepting the half acre that had been under white Mustard. In another field of 45 acres, 3 acres were laid down with white Mustard-seed, with the same beneficial result as regarded the wire-worm, while, at the same time, the crop of Wheat was better in that portion. Encouraged by this success, I next year sowed a whole field of 42 acres, which had never repaid me for 19 years, owing to the ravages of the wire-worm, and not one of which could be found the following year. My crop was superior to any I had grown for 21 years." The above Article was written by Mr. Talland, Little Houghton, Northamptonshire, and was inserted in the "Country Times," September, 1831, from which it was copied into "Loudon's Gardeners' Magazine." I add another quotation regarding wire-worm:—"At the last meeting of the Entomological Society, Mr. Spence described a plan successfully adopted in the west of England for the destruction of wire-worms, which had greatly infested the Turnip-fields. He employed boys for picking them up, at the rate of 1½*d.* per 100: in the course of a few days they obtained upwards of 11,000, the expense of clearing one acre being 1*l.* 2*s.* 6*d.*" See "Mark Lane Express" for January 8, 1838, page 7.

THE DEADORE CEDAR (CEDRUS DEODARA).

RAISING SEEDLINGS.

BY A NURSERYMAN.

IN the spring of 1844 I obtained a portion of seeds of this pretty tree. Learning it was customary to raise the seedlings in a hot-bed frame, &c., but not having one at liberty, I ventured to sow the seed in a south aspected border; about the middle of May, I covered them an inch deep with fine sifted soil. A fortnight after I gave them a little water, using a fine rose, and once a week repeated it. Many of the plants soon appeared, and in succession, for some weeks after. At the end of September I took up all the strongest plants and potted them, placing them in a cool frame for winter protection, and every one has succeeded admirably. I therefore advise out-door raising of the seedlings.

TO DESTROY RATS OR MICE.

"I WAS advised," says a correspondent, "to cut cork into *thin* slices and then fry them in fat, butter, or meat gravy; the animals are very fond of them and eat them greedily; placing the pieces for a repast, the pests in a garden soon disappear. Of course the prepared pieces must be secured from cats, dogs, &c., or they may fall a sacrifice too. I was told, that to use brown paper fried in fat, &c., would effect the same purpose as cork. I have not had occasion to try it since obtaining information."

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

PROCEED without loss of time to complete all necessary alterations in this department, such as removing shrubs, planting edgings, laying turf, &c. Shrubs requiring increase by layers may be done now, in a similar way to the Carnation; some of the tough wooded kinds do well by having the branch twisted at the part where the cut in laying would have been made. All perennial and biennial border plants which it may be desirable to increase should be parted at once. Where they have spread out large, the most ready way is to divide them with a spade into as many pieces as are wanted. Now is the time to decide upon some arrangement of plants for the beds of the flower garden, in order to give plenty of time to prepare a stock of those required. Hardy annuals, to bloom early in the summer, may be sown in sheltered situations. Cover them with finely sifted soil, and press it gently down on the seeds.

FLORISTS' FLOWERS.—At this time *Auriculas* and *Polyanthuses* that were top-dressed in proper time, and since received due attention, will have commenced growing. Admit air on all favourable occasions, to prevent them being drawn. Where increase is not particularly required, it will greatly strengthen the bloom by removing all side shoots as they appear. Give every attention, to maintain the plants in vigour. Manure water should be given once a-week, taking care it is not poured upon the foliage. Sheep's-dung, put into a tub, and soft water poured upon it, in quantity so as it forms a strong liquid, is very serviceable. The dung must be collected for a few weeks before using. Old cow-dung will also answer the same purpose. If any appear too forward in showing bloom, it is best to leave them to take their chance of being in condition when wanted. Checking is almost sure to induce small and uneven flowers.

Anemonies and *Ranunculuses* must be finished planting immediately. If no bed has been prepared for them, it may be made by taking out the soil to the depth of fifteen or eighteen inches, and replacing it at the bottom, with a layer three or four inches thick of cow-dung, and filling up with soil composed of decayed turfs taken from a loamy pasture. The mode of planting is in drills, and to press the tubers down, so that they rest firmly, drawing the soil over them to the depth of two inches. The arrangement of the varieties is purely a point of taste; some, when they are for exhibition, keep each sort to itself, in rows, across the bed. The only advantage of this is that the best blooms are more easily selected. Such as were planted in the autumn will now be making their appearance above ground. It is very necessary to keep the soil well round the crown of the plant; when this is neglected the bloom suffers. Should the weather be severe, protection will still be requisite. *Tulips* require continued attention, as directed last month. Any that happen to be affected with canker will appear sickly; the roots should be examined, and the damaged part cut clean out. If left exposed to sun and air, the parts will soon dry and heal. Avoid frosty air getting to the wound by exposure. If by any casualty they get frozen, then, early in the morning, sprinkle the tops over with cold water, and keep them covered over for an hour or so before they be exposed, as the sun must not be allowed to shine upon them until the frost is all out. *Carnations* and *Picotees* may, at the end of the month, receive their final shifting. The pots known as No. 12's are the size usually employed. In potting, place at the bottom two inches deep of crocks, to give free drainage. Use a compost—which is best if it has been previously prepared and become well incorporated together—of these proportions: two barrows full of fresh yellow loam, three of well-rotted horse-dung, and half a barrowful of river sand, well mixed; plant in it *without sifting*, but breaking very well with the spade. Place the plants in a sheltered situation out of doors, and let them be carefully looked after. All those not required for potting plant out in rows in a bed, each plant being a foot apart in the rows, and two feet from row to row. Where frost has disturbed the roots of *Panseys* in beds, they should be pressed into their places, and a top-dressing of rich mould given to them, all over the bed. In forming new beds the plants should be placed six or eight inches apart, and the situation where they can have all the benefit of free air. Plants in pots, under glass, will require shifting into larger sizes, for as this is the period when they begin to grow, they will soon become weak, and bloom out of character, if confined in small pots. If beds of *Pinks* were not planted in autumn, at the end of the month they may be. In removing the plants, whether out of pots or open ground, be careful to retain all the ball of roots, and as uninjured as possible. For the open bed use a trowel for removing with. When planted, water, to settle the soil around the roots. *Hyacinths* in beds ought to have protection from sharp frosts, and on fine days the surface soil should be stirred over occasionally.

IN THE FORCING FRAME.

Sow seeds of any tender and half-hardy annuals that have been omitted, and introduce them here. Such as have been sown, and are up, should have all possible air given, to prevent their being drawn. In watering, it must not be over the tops, or many of the sorts will be rotted by it. The best method is to flood over the surface of each pot, always using tepid water. Annuals sown in frames—*Cockscombs*, *Balsams*, *Thunbergias*, &c.,—if large enough to pot, should be done in 60-sized pots.

Sow seeds of *Dahlias*, *Fuchsias*, *Petunias*, *Verbenas*, &c., as soon as possible; cover them lightly with fine sandy soil, and press the surface smooth with a piece of flat board. Seeds of most greenhouse plants will do well if sown now. *Dahlia* roots, brought in last month, will have began to push shoots, which, when about three inches long, should be taken off, cut close under a joint, and struck in sand. Continue to put in cuttings of all kinds of plants intended to bed out. Re-pot and forward *Amaryllises*, *Gesnereas*, &c., as directed last month. *Ipomeas*

Echites, and similar plants, may be trimmed in, disrooted where necessary, and brought here to excite early growth.

IN THE COLD FRAME, GREENHOUSE, &c.

Continue to admit all air possible. Re-pot the various inmates as required from time to time, and examine to see that the drainage is free. If any of the soil looks black and wet, and the pot feels heavy, there is something wrong. If any of the pots are too full of roots, the plants should be removed into pots a size larger; and the soil should be rich, light, and moderately porous. There is a soil which is good for almost every kind of greenhouse plant—loam, with the turf rotted in it, decayed cow-dung, leaf-mould, peat-earth, chopped small or rubbed through a very coarse sieve, and road-sand, equal quantities of each; it will do for everything; but if we had heaths to grow, we should treble the quantity of peat-earth, and not alter the others, so that it would be one of each of the others and three of peat-earth, instead of one all round. In moving a plant from one pot to another take care that the plant be not sunk in the least more in the new pot than it was in the old one, and see that the compost, well mixed up, is made to go down very nicely all round the old ball of earth. Plants shifted in this way should have a little water to settle the earth to the roots. All the shelves of the greenhouse, and all the plants, should be cleared of dead leaves, and the places kept very clean.

Calceolarias, *Verbenas*, *Petunias*, and other young stock, intended either for decorating the flower garden or to bloom in pots, must, as growth advances, have the shoots stopped, which will cause them to be bushy. *Fuchsias* require similar attention, forming cuttings of the young shoots, if desired.

Camellias exhausted with flowering should now receive a little extra attention. Our practice is to remove them to a cooler situation for three weeks, on the principle of slow breaking, and to give the root a chance of overtaking, in some degree, the expenditure which has taken place in the system. Any pruning necessary is performed at this juncture; no plant can succeed better, after judicious pruning, than the Camellia.

IN THE STOVE.

Successive introductions of plants for early bloom should still be attended to, as directed last month. See to pruning in such creepers as are overgrown, before fresh growth commences. Complete all potting as early as possible. Orchidaceous plants, especially, should be done at once, in order to obtain as early a growth as convenient. Use plenty of charcoal, in lumps, and keep plenty of indestructible material round the outside of the pots, to facilitate the passage of both air and moisture with rapidity. Increase atmospheric moisture in proportion to heat and light. Look sharp after insects; the snails, &c., are very fond of the young buds at this period, and soon cause great injury. Orchids recently imported should have a warm and constantly moist atmosphere for a few weeks, until they begin to grow, but no water should be applied to them until that period, and then with moderation. They will fill their pseudo-bulbs by atmospheric moisture alone, and all excitement otherwise risks the well-being of the plant.

THE RED SPIDER.

This pest in gardening is assuredly not so commonly met with now as it was twenty years ago. And why? Not because any recipe has become of general and systematic application, but that a much greater humidity of atmosphere is maintained in our hothouses than in former days. Humidity alone is not however sufficient at all times to keep the spider under; and I beg to remind the readers of the Cabinet that sulphur rightly applied in conjunction with atmospheric moisture, is perfectly efficient to that end. Apply it three times a year on an under pipe, or on the least heated portion of a flue, thick as paint, and worked up with soft soap water to make it adhere for some time. Do this in February, in May, and again in August, and maintain a wholesome amount of atmospheric moisture, not a sudden steam, but a slow, yet permanent supply, and I will engage that the spider will be rendered perfectly harmless. Do not, however, apply it on any surface that is so warm at times as to produce inconvenience to the hand when grasping it: this is a simple but safe rule.

THE FOXGLOVE TREE (PAULONIA IMPERIALIS).

This is a highly ornamental tree, which has not yet been fully estimated in this country. It appears that for the first year or two, when planted in congenial soil, it grows most vigorously, and continues its growth late in the autumn. The shoots, from their extraordinary grossness, are not properly ripened, and consequently get killed back to the harder parts in winter. I have plants at this moment with leaves 20 inches across, and shoots of the current year's growth six feet long. I was informed that when first planted in the Garden of Plants at Paris, it grew away in the same robust manner. This is not, however, now the case, the original tree which first flowered there is 30 feet high, the branches are about 20 feet in diameter, with a clean stem 3 feet in circumferenc. The leaves now upon this tree are about the size of the Catalpa, and the shoot, scarcely exceeding a foot in length, which of course ripen perfectly. This is (October) covered with a complete mass of incipient blossoms, which do not expand until next spring, when the tree exhibits an inconceivable picture of beauty. It is a remarkable fact that this tree only flowers in alternate years, when it ripens an abundance of seed. What an admirable subject this is for shrubberies and general ornamental planting, both as regards its foliage and flowers, and it may well be pointed out as an object deserving the attention of planters.

BRIEF NOTES AND CORRESPONDENCE.

Araucaria imbricata.—*W. Baker.*—You may see fine specimens of this noble tree in the gardens at Dropmore and Kew. The former one is believed to be the largest in Europe. It is upwards of twenty-three feet high, and the girth of the stem, close to the ground, is near three feet. The largest branches are each more than twelve feet in diameter. The most suitable soil in which you can plant is a rich loam, raised so as to form a mound of about eighteen inches above the surrounding surface. Much moisture is injurious, and it will be only during a period of drought that water is required. It is perfectly hardy, no further protection being necessary than securing it firmly to a stout stake until it becomes established, to prevent it being blown over by strong wind.

PLANTING A PIECE OF GROUND.—*Riscemara* will be much obliged for some hints as to the best appropriation of a plot of ground situated as described. "Imagine a mansion situated on a hill, with lawn and shrubs sloping down to a navigable, but not very wide, river, on the other side of which lies a verdant meadow of five acres, bounded by a railway line, which line has, on its exterior portion, a new cut for navigation, rendering the five acres, recently purchased, an island. The soil resembles peat, and the surface may, at high tides and inundations, be sometimes, but rarely, flooded. The other side of the valley being terminated by a ridge of hills well clothed with trees, the object is so to embellish the five acres as to form a pleasant foreground to a beautiful view, and to plant out part of the line of railway. The difficulty is to find what trees would answer best. I should like to form an imitation of American scenery, and believing that many of the noble flowering trees of that country grow in swamps, I should be gratified by any hints upon the subject. Would the Tulip tree thrive in such a locality, or the Deciduous Cypress, the Hemlock Spruce, Catalpa, or any of the Pine tribe?"

No doubt many of our readers can furnish information as to what trees flourish in America in a soil similar to that our correspondent mentions. It is very likely too that in this country a practical proof as to what will succeed in like circumstances has been realized. In either or both cases, we shall feel much obliged by the request of the inquirer being complied with as early as convenient.

ROSES.—*Annette* asks, "Why the buds of the Hybrid Perpetual Roses, 'Newton' and 'Prince Albert,' will not open well in a border where other Roses of the same kind with Bourbon and Provence flourish extremely well? This summer both Rose trees were covered with buds, but of the first bloom not one of them opened. The second bloom, 'Prince Albert' had a few flowers in perfection, but there were still several buds which withered off.—May I venture to plant China Tea-scented and Noisette Roses against a paling? The paling faces south, and I have had painted canvas put behind it to shelter them from the north. If you think these kinds of Roses will flourish in this situation, will you, or any of your numerous correspondents, give me a list of ten of the best in each class? I have hitherto been afraid to try anything excepting Ayrshire Roses, but I wish to have some that will bloom till the frosts come."

It is probable that there may be some defect in the soil the Newton and Albert Roses are planted in, or in the subsoil. The season being so very dry, the plants might require watering at the roots, more especially so if the subsoil be gravel and the soil but shallow. The following Roses will succeed well in the situation above named, affording the protection described.

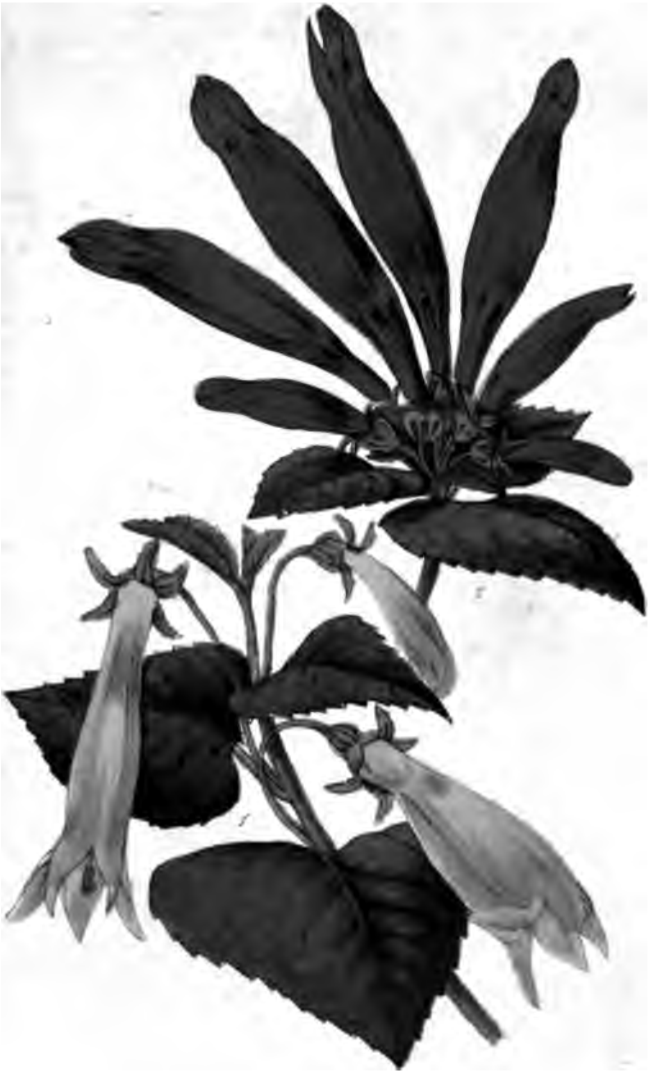
Noisette.—Boulogne, dark purple, very distinct, double. Cloth of Gold, pure yellow, bright, vigorous. Fellenberg, rich bright crimson. Jaune Desprez, bright fawn, very fragrant. Lamarque à Cœur Rose, white, with fawn centre. Miss Glegg, pale flesh, nearly white, superb. Solfaterre, bright sulphur, superb. Victorieuse, pretty blush, large. Luxembourg, bright rosy-purple. Jeanne de Arc, very pure white, vigorous.

Tea-scented.—Bougere, shining bronze, rose, superb. Devoniensis, creamy sulphur, rose-tinged. Comte de Paris, large, perfect, pale rose. Eliza Sauvage, pale yellow, orange centre, superb. Josephine Malton, large, shaded white, beautiful. Perfection, apricot colour, very bright. Goubault, bright shaded rose, very fragrant. Maria de Medicis, bright rose, shaded with fawn. Bride of Abydos, sulphur and white, tinged with rose. Fragrans, bright rosy-crimson, pretty.

SCARLET VERBENA.—Can you inform me why the Scarlet Verbena does not flower well with me? It seems to go all to rot; it covers the ground, and throws out roots at every joint, but is very shy of flowering, except in a basket or at the edge of the bed where it cannot make root. Do you think if the plant was surrounded with some material into which it could not make root that it would flower better?

G. L.

In a very rich soil the Verbena grows luxuriantly, but, in proportion, the production of flowers is less. There is a variety of the scarlet which covers the ground with a close carpet of green, but scarce blooms at all. By your plant blooming more freely at the side of a basket we conclude it was planted in a soil too rich.



Siphocampylus.

1. cordatus. 2. microstomus.

FLORICULTURAL CABINET

APRIL, 1847.

ILLUSTRATIONS.

THE well-known and much-admired genus **Lobelia** has long formed one of the chief ornaments in the greenhouses and flower gardens of this country. The first species, *L. Cliffortiana*, was introduced upwards of a hundred years ago, since which time there has been an addition of about one new kind each successive year. Some of our modern botanists discovered, a few years back, that several of the species possessed such distinct characteristics as to justify a new arrangement being formed, and which should constitute three genera in future. This being accomplished, the **Siphocampylos** became one of the sections. The name is adopted from siphon, a tube, and kampulus, bent or curved, as is, more or less, the tube of the corolla. The genus contains some very beautiful and showy flowering species, several of which not only flourish admirably in the greenhouse, but being planted out of doors in spring, bloom beautifully during summer.

The two new species we now figure are valuable additions, being distinct and handsome, and well merit cultivation.

SIPHOCAMPYLOS CORDATUS—Heart shaped.

We are not aware of the native country of this comely and beautiful species, but it is probably from Mexico. It proves to be easy of cultivation, and forms a distinct and beautiful contrast with the flowers of the other species. It forms a compact bush, blooming for several months. We believe it is cultivated in some collections as *S. glabruscalus.*

SIPHOCAMPYLOS MICROSTOMA—Small-mouthed.

This rich and showy flowering species we saw in bloom in the admirable collection in the Royal Gardens of Kew, where it has flowered very freely, beginning early in the season, and continues till autumn; in fact, like some others of the tribe, it may be induced to bloom nearly the entire year. Mr. Purdie, the collector, sent it to the Royal Gardens from New Grenada. It well deserves to be grown in every collection of ornamental plants.

All the kinds are easily cultivated. The most vigorous growers should have a rough compost of rich loam and peat, equal parts; the others, a more rich loam, and only one-third of peat. Cuttings strike freely in sand.

NOTES ON NEW OR RARE PLANTS.

ANEMONE JAPONICA—JAPANESE ANEMONE.

Ranunculaceæ. Polyandria Polygynia.

THIS showy species was forwarded by Mr. Fortune, from Shanghae, the Japanese part of China, to the Horticultural Society, and it has bloomed in the Garden at Chiswick, in the greenhouse. Dr. Siebold states it inhabits damp woods on the edges of rivulets, on a mountain called Kifune, near the city of Mako, in Japan. It is a perennial plant. The flowers are much like a single-blossomed Dahlia, each flower being about three inches across, of a rich lively-rose colour, having a white centre, surrounded by a yellow circle. It blooms freely, and is very showy. The flower stems rise to about half a yard high. It is now found to flourish in the open ground, and in masses produces a pretty effect. Figured in *Pax. Mag. Bot.*

BRUNFELSIA NITIDA: VAR JAMAICENSIS.

Scrophularinæ. Didynamia Angiospermia.

An erect shrub, four feet high, which was sent by Mr. Purdie to the Royal Gardens of Kew, where, in the stove, it bloomed. Each flower is about four inches across, yellow, and has much the appearance of a yellow Ænothera. Figured in *Bot. Mag.*, 4287.

CLEMATIS TUBULOSA—TUBULAR-FLOWERED.

Ranunculaceæ. Polyandria Polygynia.

It is a native of China, a hardy perennial, of an erect habit; the flower stems rise about two feet high. The flowers are produced numerously in terminal heads, of a rich purple-blue outside the tube, and the four parted revolute divisions of the top are edged with white. It well merits a place in every flower garden. Figured in *Pax. Mag. Bot.*

CONVOLVULUS ITALICUS—ITALIAN BINDWEED.

Convolvulaceæ. Pentandria Monogynia.

It is a hardy climber, a perennial species, and a native of the South of Europe and North of Africa; also it grows in vineyards, and decorates the hedge-rows in Egypt and Algiers. The flowers are a beautiful rose colour. Each blossom is about two inches across. It is a very suitable plant for the rock work, and may be had in the London nurseries.

DIPTERACANTHUS SCANDENS.

A new stove climber, exhibited by Mr. Glendenning, of Chiswick, at the Horticultural Society's Rooms, in Regent-street, March 16. It is a native of Sierra Leone, and possesses shining dark-green coriaceous leaves. The flowers are produced freely, in short racemes at the joints, and bear some resemblance to those of a small white Petunia. It is a pretty addition to our stoves.

DEUTZIA STAMINEA—BROAD-STAMENED.

Philadelphaceæ. Decandria Tetragynia.

It is a native of the high mountains of North India, and forms a hardy deciduous shrub in England, which flowers abundantly in the early part of summer. The blossoms are produced numerously in cymes on short lateral shoots along the branches, white, sweet-scented. Each blossom is about half an inch across. It has bloomed in the garden of the Horticultural Society at Chiswick. Figured in *Bot. Reg.*

NEPENTHES RAFFLESIANA—SIR S. RAFFLE'S PITCHER PLANT.

Nepenthaceæ. Diæcia Monadelphia.

This most singular and highly beautiful plant is figured in the *Botanical Magazine* for March, and the following interesting account accompanies it:—"To Dr. Jack is due the discovery of this remarkable species of *Nepenthes*, in the island of Singapore. It was our privilege, in the first volume of the '*Companion to the Botanical Magazine*,' to publish the letters of that distinguished botanist, so early lost to science. He relates the circumstance of finding this pitcher plant in one of his many valued communications, addressed to his family at Aberdeen. Writing from Singapore, June 20, 1819, Dr. Jack says, 'My last letter from hence was sent by way of Penang; this goes home *viâ* Bengal. It is impossible to conceive anything more beautiful than the approach to Singapore, through the Archipelago of Islands that lie at the extremities of the Straits of Malacca. Seas of glass wind among innumerable islets, clothed in all the luxuriance of tropical vegetation, and basking in the full brilliancy of a tropical sky. The island of St. John's, which forms the western point of the Bay of Singapore, would, if fortified, command with cannon the Straits, through which every vessel passes to China and all the eastern settlements. A more convenient site and more formidable position could not possibly be selected; and it is really astonishing that it should have remained so long unnoticed. It was the capital of the Malays in the twelfth century, but they were obliged to abandon it during the unfortunate wars with the Javan empire of Majapulail, and retire to Malacca; and when the latter was taken by the Portuguese, they settled at Johore; and Singapore has, till now, been almost forgotten. I have no doubt it will soon rise to more than its ancient consequence. I have just arrived in time to explore the woods, before they yield to the axe, and have made many interesting discoveries, particularly of two new and splendid species of pitcher plant (*Nepenthes Rafflesiana*, and *N. ampullaria*), far surpassing any yet known in Europe. I have completed two perfect drawings of them, with ample descriptions. Sir S. Raffles is anxious that we should give publicity to our researches, in one way or other, and has planned bringing out something at Bencoolen. He proposes sending home these kitchen plants, that such splendid things may appear under all the advantages of elegant execution, by way of attracting attention to the subject of Sumatran botany.' Many of Dr. Jack's plants did appear in the 'Malayan Miscellany,' published at Bencoolen; but no plants of the Nepenthea Rafflesiana ever reached Europe alive, till the Royal Gardens were supplied with a case of them through the kindness of Captain Bethune, R.N., who, on his return from his scientific mission to Borneo, had a Wardian case filled with them; and so well were the plants established in the case, and so great was the care taken of them overland from India, that they were as healthy on their arrival at Kew in 1845, as the day they were transplanted from their native glen in Singapore. It was the very year in which Dr. Jack writes, that, as is well known, at the suggestion of his friend and patron, Sir Stamford Raffles, the island of Singapore was purchased by the India Company of the Sultan of Johore. Mr. Crawford was its first governor and historian. Since that period it has become a settlement of vast importance to our country; and being much frequented by our ships, both mercantile and of the navy, it is to be hoped its vegetable productions will soon be familiar to us. Dr. Jack, with the modesty which was a striking feature in his character, gives the credit of the discovery of this plant in the forests of Singapore to Sir Stamford Raffles; probably in order that the name might be considered more appropriate. Singapore, however, does not appear to be the only station for this plant. Korthals, if we read his High Dutch correctly, gives Binteme, off the coast of Sumatra, as another habitat.

"Our plants, on their arrival, were soon removed into pots, according to their sizes, and placed in a pan frequently filled with water, having moist moss covering the earth. With this treatment a fine spike of male flowers was thrown up in the autumn of the same year. The spike is large and handsome, from the rich colour of the copious perianths, and the numerous yellow heads. The pitchers, or ascidia, are not only remarkable in their shape, and from their different form in different parts of the plants, but for the richness of the colour and spots, and the elongated mouth with the curiously striated margin: the striæ terminate internally in teeth, and give a beautifully pectinated appearance to the inner edge.

"The *tendrils* of the upper leaves are twisted into one or two spires at the middle, and terminate in long ascending funnel-shaped *urns*, flattened anteriorly, but not winged, and gracefully turned at the mouth like an antique vase or urn. Both have the inverted margin beautifully and delicately striated and variegated with parallel stripes of purple, crimson, and yellow. The *opercula*, or *lids*, are incumbent, membranaceous, ovate, marked with two principal longitudinal nerves, and cuspidate behind the hinge. The *racemes* of *flowers* are at first terminal; but the stem begins, after a time, to shoot beyond them, and they become lateral, and are always opposite to a leaf, which differs from the others in being sessile, and its cirrhus never bearing an urn at its extremity."

PENTSTEMON MINIATUS—VERMILION-COLOURED.

Schrophulariaceæ. Didynamia Angiospermia.

Obtained from the north of Mexico. It is a hardy, half-shrubby perennial, requiring similar treatment to *P. gentianoides*. The flowers are of a rich brilliant vermilion colour, each blossom about an inch and a half long. It is in the Horticultural Society's Garden at Chiswick. Figured in *Bot. Reg.*

PRIMULA MUNROI—CAPTAIN MUNRO'S PRIMROSE.

Primulaceæ. Pentandria Monogynia.

Seeds of this pretty Primrose were collected on the mountains of the north of India, and sent to the Horticultural Society by Captain Munro, where it has bloomed. The flower stem rises about ten inches high. bearing a head of five to seven flowers, white, with a faint yellow eye, Each blossom is about an inch across. The plant is hardy and a perennial. Figured in *Bot. Reg.*

PHARBITIS CATHARTICA—PURGING PHARBITIS.

Convolvulaceæ. Pentandria Monogynia.

It is a native of St. Domingo and Mexico. It is, apparently, a twining annual branching plant, flowering freely. The flowers vary in colour from a rich violet-blue to a deep reddish-purple. Each blossom about two inches across the mouth. It is in the collections ot Sion Gardens and the Royal Gardens of Kew.

RAPHISTEMMA PULCHELLUM—THE PRETTY.

Asclepidaceæ. Pentandria Digynia.

It is a native of Hindoostan, and is a fine climbing shrub for the stove or conservatory; very similar in its character to Stephanotus floribundus, but not so stiff in its habit. It blooms very freely in large corymbous pendant heads. The flowers are white at first, afterwards changing to a delicate cream colour, each of the five parted portions having a red streak up the centre. A separate blossom is campanulate, about two inches across, and fragrant. It well merits cultivation. Figured in *Pax. Mag. Bot.*

RUELLIA MACROPHYLLA—LARGE-LEAVED.

Acanthaceæ. Didynamia Angiospermia.

It is a stove plant of considerable beauty, the flowers are produced in branching panicles, numerously, of a fine rich scarlet colour. A separate blossom is near three inches long. It blooms all the summer season, and small as well as large plants flower very freely. It is well worth culture in the stove, conservatory, or warm green-house. Figured in *Pax. Mag. Bot.*

SCUTELLARIA CORDIFOLIA—HEART-LEAVED SKULL-CAP.

Labiatæ. Didynamia Gymnospermia.

A native of Mexico, and blooms profusely in a warm green-house, or stove, at the latter part of summer, from August to November. The stem is erect, branched, producing long, terminal, many-flowered ramose racemes of fine orange-scarlet blossoms. Each flower is about an inch long. It is a desirable plant, and very ornamental. It bloomed beautifully at the Royal Gardens of Kew.

IXIAS, SPARAXIS, GLADIOLUS, &c.

REMARKS ON THEIR CULTIVATION.

BY AN ARDENT CULTIVATOR.

For many years the entire class of flowers, of which the above named form a part, have possessed very considerable charms for me. I have, therefore, grown them in Devonshire with very great success, by the following process of culture. It being the result of my own experience, I forward it for insertion in the Floricultural Cabinet.

In my own neighbourhood beds of Sparaxis grandiflora, and others, also of Ixias, are often seen; but the flowers, being so delicate, are liable to so many casualties, that they are generally injured, and their beauty defaced by exposure. In order to avoid such disappointments, I cultivate my stock in pots, equally as luxuriant and profuse in flowers; at the same time I have protection for the blossoms, and when they are arranged upon the stage in the greenhouse, pit, or frame, more fully display the delicate brilliancy, beauty, and loveliness of their flowers of orange, white, velvet, pink, and other variations in colour, and very much superior to the open air culture. The warmth and protection afforded tend to a full expansion of the flowers, and that, too, during a longer daily period. About the middle of October I examine my bulbs, and take off any offsets, and pot them in a compost formed of turfy loam, equal to two-thirds; the other part consisted of peat and silver sand, the whole well mixed together. I had a free drainage of broken pot, over which I laid some smallish bits of old dried cow manure, upon which the compost was placed, &c. This very much tends to the vigour of the plant. Having a moderate hot-bed at work, I placed a foot deep of dry old tan, and plunged the pots in it, taking care that the heat was just warm to the pots. I admitted abundance of air by day, but closed the glass during night. I gave no water to the bulbs till they had pushed roots and the foliage began to appear, and even then in frosty weather gave it but slightly, only to preserve them from draught. When severe weather began, I had the frame banked well round with warm dung, half a yard thick, and the glass covered six inches deep with dry hay, over which was laid a piece of asphalte.

With this management I usually had a fine display by the end of April, and just before expanding their blossoms I had them placed in the greenhouse. In order to prolong the blooming season, I usually potted a second lot of bulbs at the end of November, and such being treated in all respects as the first potting, bloomed for several weeks after the first had ceased. When the blooming was over I continued to water the bulbs, in order that they might be duly perfected for the following season. I had the pots placed in the frame, giving air freely, and as the leaves begun to change, gradually allowed them to become dry, and the bulbs became fully ripened. In October I commenced potting, &c., as before. It is very essential to get the bulbs well ripened.

A collection of Ixias, Sparaxis, Tritonias, Babianias, and all others of what are termed Cape Tridæa, ought to be grown wherever there be facilities for it. They form a most beautiful display, are easily grown with little trouble, and may be procured at a trifling expense.

THE SAP OF PLANTS.

BY SENEX.

Having noticed inquiries in the Cabinet relative to the nature and movements of the sap of plants, and no specific replies having been given, I have extracted the following from Dr. Lindley's "Introduction to Botany,"* which will fully elucidate the subject, and I shall be glad to observe its appearance in an early number, as it will contribute useful hints to cultivators of plants, that may be applied at the early stage of spring growth.

"Of the Sap.—For the sustenance of plants a fluid is necessary, which is absorbed by the roots from the earth, then sent upwards into the stem, afterwards impelled into the leaves, whence it descends through the liber, transferring itself to the inmost parts of the wood. This fluid, which constitutes the blood of plants, is called the sap. When first introduced into the system, and even when altered in some degree by having dissolved the various substances it encounters in its passage, it is true sap; afterwards, when its nature has been more changed by elaboration in the leaves, it becomes what is called the proper juice.

"If the sap be examined in its most simple state, it will be found to consist of water, mucilage, and sugar. As the two last can scarcely have been absorbed directly from the earth, it is inferred that, as soon as the fluids taken up by the roots enter the system, they suffer some chemical decomposition, the result of which is the production of mucilage and sugar. In addition to the supply of sap which is obtained by the roots, a certain quantity is, no doubt, also absorbed from the atmosphere by the leaves, as is evident from succulent plants, which will continue to grow and acquire weight long after their roots are severed from the earth. This absorption on the part of the leaves chiefly takes place during the night, or in cloudy weather; while perspiration, on the other hand, goes on in the day-time in bright weather.

"With regard to the chemical nature and changes of the sap, I cannot do better than give the statement of Link, with some necessary alterations. 'The food of plants must be composed of oxygen, hydrogen, carbon, and azote. Water consisting of oxygen and hydrogen alone is not sufficient. Many experiments, indeed, have been instituted to prove that pure water is a sufficient food, especially by Van Helmont, Eller, Bonnet, Du Hamel, and others; but it is probable, as Walerius has inferred, that the water out of which plants are formed already contains the necessary chemical principles. To this it is objected that plants grown in water alone never arrive at perfection, or mature their seeds. But this is not strictly true; they do perfect their seeds: but it is not surprising that crude water should be insufficient for purposes which are fully answered by water properly mixed and tempered.'

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* This work we recommend to the attention of all gardeners and botanists.—Conductor.

"That the extractive matter contained in earth was the real food of plants was long ago stated by Woodward and Kylbel; and most physiologists have adopted this opinion. But it has been estimated that a plant, when dried, does not derive more than a twentieth part of its weight from extractive matter and carbonic acid dissolved in water. Now, supposing this calculation to be not far from the truth, it serves to show that extractive matter and carbonic acid are not alone sufficient for the nutriment of plants.

"Nevertheless, if neither extractive matter nor carbonic acid can be considered to constitute exclusively the food of plants, it is at least quite certain that they not only cannot exist without the latter, but that it forms by far the greater part of their food. It is well known that roots cannot perform their functions unless within the reach of the atmosphere. This arises from the necessity for their feeding upon carbonic acid, which, after having been formed by the oxygen of the atmosphere combining with the carbon in the soil, is then received into the system of the plant, to be impelled upwards, dissolved in the sap till it reaches the leaves, where it is decomposed by light, the oxygen liberated, and the carbon fixed. It has also been ascertained that, feed plants as you will, they will neither grow nor live, whether you offer them oxygen, hydrogen, azote, or any other gaseous or fluid principle, unless carbonic acid be present.

"The course which is taken by the sap, after entering a plant, is the next subject of consideration. The opinion of the old botanists was, that it ascended from the roots between the bark and the wood; but this has been long disproved by modern investigators, and especially by the experiments of Mr. Knight. If a trunk be cut through in the spring, at the time the sap is rising, this fluid will be found to exude, more or less, from all parts of the surface of the section, except the hardest heart-wood, but most copiously from the alburnum. If a branch be cut through at the same season, it will be found that, while the lower face of the wound bleeds copiously, scarcely any fluid exudes from the upper face; from which and other facts it has been fully ascertained that the sap rises through the wood, and chiefly through the alburnum. Observations of the same nature have also proved that the sap descends through the liber. But the sap is also diffused laterally through the cellular tissue, and this with great rapidity, as will be apparent upon placing a branch in a coloured infusion, which will ascend and descend in the manner just stated, and will also disperse itself laterally in all directions round the principal channels of its upward and downward route.

"With regard to the vessels through which this universal diffusion of the sap takes place, it has already been stated that its upward course is always through the woody fibre, and probably also through the ducts, and that it passes downwards through the woody fibre. But there can be no reasonable doubt that it is also dispersed through the whole system, by means of some permeable quality of the membranes of the cellular tissue, which is invisible to our eyes, even aided by the most powerful glasses. It has also been suggested that the sap finds its way upwards, downwards, and latterly through the intercellular passages, which exist at the points of union of every individual elementary organ. That such a channel of communicating the sap is employed by nature to a certain extent I do not doubt, especially in those plants in which the intercellular passages are large; but whether this be an universal law, or has only a partial operation, is quite unknown, and is not, perhaps, susceptible of absolute proof.

"The accumulation of sap in plants appears to be attended with very beneficial consequences, and to be deserving of the especial attention of gardeners. It is well known how weak and imperfect is the inflorescence of the turnip tribe, forced to flower before their fleshy root is formed, and how vigorous it is after that reservoir of accumulated sap is completed. Mr. Knight, in a valuable paper on this subject, remarks that the fruit of melons, which sets upon the plant when very young, uniformly falls off; while, if not allowed to set until the stem is well formed, and much sap accumulated for its support, it swells rapidly and ripens well. In like manner, if a tree is by any circumstance prevented bearing its crop one year, the sap that would have been expended accumulates, and powerfully contributes to the abundance and perfection of the fruit of the succeeding year.

"The course of the motion of the sap is a subject which has long excited great curiosity, and has given rise to numberless conjectures. It was for a long time believed that there was a sort of circulation of the sap of plants to and from a certain point, analogous to that of the blood of animals; but this was disproved by Hales, and is not now believed. This excellent observer thought that the motion of the sap (the rapidity of which he had found to be greatly influenced by the weather) depended upon the contraction and expansion of the air, which exists in great quantities in the interior of plants. Others have ascribed the motion to capillary attraction, and Du Petit Thouars suggests that it arises thus:—'In the spring, as soon as vegetation commences, the extremities of the branches and buds begin to open. The instant this happens, a certain quantity of sap is attracted out of the circumjacent tissue for the supply of these buds; the tissue which is thus emptied of its sap is filled constantly by that beneath or about it; this is in its turn replenished by the next; and thus the mass of fluid is set in motion, from the extremities of the branches down to the roots.' Du Petit Thouars is, therefore, of opinion that the expansion of the leaves, &c., is not the effect of the motion of the sap, but, on the contrary, the cause of it, and that the sap begins to move at the extremities of the branches before it stirs at the roots. That this is really the fact is well known to foresters and all persons accustomed to the felling or examination of timber-trees in the spring."

CHINESE GARDENS.

Dr. Mayen, in his *Reise um die Erde*, observes these are of a peculiar character, and differ altogether from ours in their arrangements; while the care bestowed on them by their possessors exceeds anything of which we could have formed an idea. To each branch, often even to each leaf of a tree or a shrub, the utmost pains are taken to give the appropriate turn, and the gardeners may be seen sitting constantly beside the plants, and employed in binding and pruning them, in order to accomplish the desired form. The production of the greatest variety and contrast of colours is the chief object of the Chinese flower-gardeners. Strangers to refinement and the tender emotions, the Chinese have no taste for the pure and tranquil enjoyment which the perfumes of sweet-scented flowers yield. It is only in gaudy colours, and by a marvellous skill in developing singular growths, that the Chinese gardener excels. Long and straight alleys run directly through their gardens, and are bordered by low trees of one and the same species. We visited these gardens (in the vicinity of Canton) in the month of November, and remarked the following objects: close to the entrance were large masses of Chrysanthemums, the blossoms of which had attained an extraordinary size. Then followed whole plots of Citrons and Shaddocks, which were raised in pots and loaded with fruit; and it was remarkable that all these fruits were divided into segments, and thus formed permanent monstrosities, which were further propagated by grafts. It is by such mis-growth that they acquire a finger-shaped appearance, which occurs also occasionally in our conservatories. In China these fruits are cultivated assiduously, not only for the adornment of the gardens, but also for the sake of the well-known Chinese preserved Citron, of which large quantities come to us by commerce. For this purpose they use chiefly the smaller fruits, three or four inches long, which are boiled in refined sugar. The larger fruits of monstrous shape are of the Shaddock kind, and often from ten to eleven inches long, while the several segments extend singly in all directions. In the gardens these odd-shaped fruits, as well as the sweet Oranges, with which whole plots are planted, have a neat appearance, as they do not allow any trunk to form, but force them at once to spread into branches. Large borders are to be seen planted with Camellia Japonica, and others with Cockscombs, some with white, others with yellow or red flowers; the yellow-flowered plants had shot particularly high, and they were so arranged that all the plants in a bed were of one and the same colour. We also saw in the gardens a species of Scilla, very like Sc. maritima, which showed the same sort of monstrosity as the Cockscomb. We observed Bamboos in pots, the stems of which were two or three feet high, and were wound into a spiral form from below upwards. Among the trees were the Lee-chee, Banana, Averrhoa carambola and various Palms, on the stems of which Epidendrums were trained. The ponds of these gardens, some of which were very large, contain beautiful fish, which are fed by a disgusting but common method among the Chinese, which is said to render them very plump. The stools in the pleasure-houses are, for the most part, of a coarse sort of porcelain, or they are formed of large flat stones supported by wooden frames; which by their coolness in summer, must be very agreeable to sit upon, when one is accustomed to them. Single borders are frequently edged with a small-leaved Box-tree; and the long walks are bounded by hedges of Averrhoa, Olea fragrans, and other plants, which were new to us. On the whole, we must allow that the planting in regular masses of the large-flowered Chrysanthemums, with Oranges, Camellias, Kalmias, and tall Cockscombs, is not altogether devoid of beauty; but a stranger can hardly reconcile himself to an arrangement which must appear to him so contrary to the rules of good taste. Hydrangeas and Asters seemed at this time to be out of fashion, for we saw very few of them.

EFFECT OF LIME ON SOIL.

Lime, it may be briefly observed, acts in two ways on soil. It produces a mechanical alteration which is simple and easily understood, and it is the cause of a series of chemical changes which are really obscure, and are as yet susceptible of only partial explanation. 1. It supplies a kind of inorganic food, which appears to be necessary to the healthy growth of all cultivated plants. 2. It neutralises acid substances which are naturally formed in the soil, and decomposes, or renders harmless, other noxious compounds which are not unfrequently within the reach of the roots of plants. 3. It changes the inert vegetable matter in the soil, so as gradually to render it useful to vegetation. 4. It facilitates, or enables other useful compounds, both organic and inorganic, to be produced in the soil, or so promotes the decomposition of existing compounds, as to prepare them more speedily for entering into the circulation of plants.

BULBOUS-ROOTED FLOWERS.

BY AN OLD CULTIVATOR.

Bulbous plants, from their nature and appearance, associate ill with others; and this, together with many peculiarities in their cultivation, render it necessary to devote a separate structure entirely to them, in order to carry on the necessary operations on which depend their successful cultivation. The kind of house best adapted for these plants appear to be that of a span roof, provided with benches sufficiently near the glass in the middle and on each side the pathway; that in the middle being appropriated to the largest specimens, the others to contain the smaller plants of the collection. The use of artificial heat in the culture of bulbs is one of the most important points: from their nature they require a season of rest, which ought to commence after they have done flowering and fully matured their foliage; it is then that water should gradually be withheld till the leaves are decayed; it may then be discontinued altogether. The period of rest is uncertain, some plants requiring more than others, but from one to three months according to the habit of the kind, is the most usual time; they are then to be slowly stipulated till they commence growing freely, after which they cannot be too liberally encouraged.

The use of artificial heat I have observed is a very important point; it should be as gradual as the application of water, and when commenced, and the plants thriving in it, it must not be withheld till after the flowers are decayed and the foliage mature, excepting, perhaps, the time they are actually in bloom; any decrease of temperature during the growth of the plant would, perhaps, be the cause of the bulb not flowering, and thus create a disappointment which frequently happens from this very cause. The genera which require this artificial heat are principally the following: Amaryllis, Coburghia, Gloriosa, Chlidanthus, Cyrtanthus, Polianthus, Nerine Brunsvigia, Hæmanthus and Ammochaus, as a primary class, requiring the greater degree. As a secondary class, requiring a much less share, I may mention,—Ixia, Gladiolus, Babiana, Antholyza, Sparaxia, Oxalis, Cyclamen, and others. I beg to repeat, that both heat and water must be applied by gradually increasing them, and decreasing them in the same manner after flowering. The bulbs of all, of course, while in a state of rest, must be kept in a low temperature.

CULTURE OF SCARLET PELARGONIUMS

BY A PRACTITIONER.

It is very pleasing to observe, that in every showy class of flowers, where hybrids can readily be obtained, assiduous attention has been given to attempt improvements on the previous kinds, and in the universally admired race of scarlet flowering Pelargoniums some noble varieties have been raised, which produce heads of blossoms more than fourfold the size of the old species. There is, however, a grossness of habit in the plant of some of the new varieties that renders them unsuited for small collections, without some method being employed to check such exuberance and induce a more compact and bushy habit. I have all the new varieties of the scarlet tribe, and with the too robust sorts I adopt the following method, which fully answers my purposes.

I raise a number each summer, usually striking them in August; they are potted off, and in every respect treated as is done to my general stock of other classes of Pelargoniums. When the plants are about eight inches high, I pinch off the leading shoot, which causes the production of laterals: this is generally done about the end of September, and the laterals push an inch or two long before winter sets in. In February I re-pot into larger pots, keeping the balls entire; and the laterals soon extend, so that on their being four or five inches long, I take off the leaves; a second race of laterals is procured, and as soon as practicable, I thin them where required, retaining such as will form it to a well-regulated bush. Such plants bloom admirably that season, but if kept a second year, having the shoots cut in so short as only to have two or three buds retained on each, and they again stopped on becoming a few inches long, every desired object with them, as very limited growing plants, will be obtained.

Cuttings raised in the early part of the year, and planted out in open beds, of these robust kinds, bloom very sparingly, I find, however, that the two or three years' old plants do admirably: their stems and branches having assumed a woody habit produce abundance of the largest flowers. I would always recommend plants of the above age, for planting out especially, and the situation to be full sun.

CULTURE OF HYDRANGEA HORTENSIS,

BY AN AMATEUR.

This plant is almost an universal favourite, and I think deserves a place in every flower-garden for summer and autumn decoration, as well as in the greenhouse and conservatory for ornament, when the general stock of greenhouse plants are out of doors. I am aware it is not so generally grown as it can be; I therefore give a few particulars how I have grown it with heads of bloom a foot in diameter. Early in August I take off cuttings, strike them in a hot-bed frame, when rooted, pot them off singly into small pots; they get well-established plants before winter. I do not pinch off the lead in order to induce laterals and have a bushy plant, but when any side shoots appear I rub them off. About the first week in March I re-pot the plants, into 32 or 24-sized pots, in a rich loamy soil, if I want rose-coloured flowers, and into a pure yellow loam and sandy peat, when I want blue flowers; I put no manure into this class. By this attention to potting, having a liberal drainage, giving a free supply of soft water when growing, and a warm greenhouse to forward them in; taking away laterals, I have one head to each of the extraordinary size named. By raising a fresh supply every year, I obtain young and vigorous plants. The process is short and amply repays for the attention.

CULTURE OF MARTYNIA FRAGRANS,

BY AN AMATEUR LONDON FLORIST.

This fine flowering, noble annual plant was introduced into this country from Mexico, in 1839, as one of the handsomest annuals that had been sent. Although it has been so long in the country it is rarely cultivated. Very few seeds are perfected, it is said, and in consequence are dear; also plants are raised with difficulty. By the following method I have succeeded quite satisfactorily.

I sow the seeds at the end of January in sandy peat soil, sprinkling at the top a quarter of an inch of white sand. Having soaked the seeds for about half an hour, I carefully peel off the outer skins, place them firmly in the sand, and then cover them about a quarter of an inch with the sandy peat soil, pressing it somewhat firmly upon them. I cover them over with a small glass, and place the pot in my forcing pit, or in a hot-bed frame when I have one at work at that time. The pot is put in a saucer having constantly a supply of water therein, and invariably the plants are readily raised. I retain the pot in the same place, and when the plants are nearly large enough to pot off, I have the bell-glass raised up a little in order to inure them to full exposure. I never pour water over the surface of the soil whilst they are in the seed-pot, as certain destruction would be the result.

In potting, care is taken to have all the small roots, and if a portion of the soil with each plant, the better. I use sand, peat, and loam, equal parts, and have a liberal drainage. I keep the plants in the hot-bed frame, or in my forcing peat, heated on the tank system, and consequently have a moist atmosphere. The plants are re-potted as the roots fill the pots, and when (in the hot-bed) they have attained a size requiring removal elsewhere, I place them in my pit, or plant stove; and when they become vigorous I have them placed in my greenhouse, which has a span roof, and there they bloom beautifully, and become charming ornament, forming compact bushes, not loose and robust, but neat. The Gloxinia-like flowers, produced in erect panicled racemes, of a deep purplish-red, with a yellow throat, are highly fragrant, perfuming the air to some distance with the sweetness of violets. It is every way worthy of cultivation.

BOUVARDIAS.

These handsome flower-garden plants may be rapidly increased by taking the principal, in February, and cutting them into lengths of about two inches; they should then be planted around the sides of a sufficient number of pots and be plunged in a hot-bed. When they have sprouted, they may be potted singly into small pots: and being encouraged to grow in a warm house or frame, will make strong plants by May, when they should be hardened, and planted out into beds of peat soil. They make very handsome beds in sheltered situations.

MIGNONETTE.

ITS CULTURE FOR WINTER BLOOM.

BY A LONDON AMATEUR GARDENER.

I deem it a luxury to have this universally admired fragrant flower, in profusion during the winter months, aud this I have enjoyed for the last four winters. The following mode of treatment was given me by a London nurseryman; and by pursuing it, I have grown and flowered the plants vigorously.

My friend stated, " After four years' sowing, without the least failure, I consider my system established, and by it, without the least variation, Mignonette in flower by Christmas, and as strong as border Mignonette. On the 20th of August I sowed one hundred pots of thirty-twos, filled with the following compost: half sandy loam, the other half made up with leaf-mould and road sand, not sifted, but very dry when used, and pressed into the pots to the brim. When the seeds are sown, a little of the compost is sifted over them; the pots are then put into a pit or frame, and set very near the glass. The lights are kept off at all times, except during rainy weather, when they are always put on, as above all things a drop of rain must never fall upon the pots, for several reasons. The first of these is, because rain is often very heavy, and washes the seeds out of the pots. Secondly, the rain is often too little and only moistens the surface. And, thirdly, after the 1st of October, rain is too cold. I water the plants with a very fine rose, and always twice over, but never until they are on the point of flagging. After the 1st of October I either warm the water or use it out of the stove. I remove the Mignonette to the front of the greenhouse about the 1st of November, for fear of damps. If a succession is wanted, I cut down as many as may be necessary about the middle of December, and these make a better blooming and thicker pot of Mignonette than a second sowing. I leave only six or seven plants in each pot. I do not vary in any way from the above now, excepting it is kept in pits all the winter, instead of the front of an airy greenhouse, and I have at this time (December 10th) about one thousand pots, and I do not hesitate to state that better Mignonette is not in the neighbourhood of London, which will be in full flower by February and March."

EPIPHYLLUM TRUNCATUM.

To propagate the Epiphyllum truncatum (says a correspondent of the *Journal of the Horticultural Society*) prepare young healthy stocks of Cereus speciosissimus, and engraft them with the above in March, from one to two feet above the surface of the pots. Grow them in the stove till they are sufficiently large for flowering, which should be in about eighteen months from the time they are grafted. In the autumn of their second summer's growth remove them from the stove to a cool airy part of the greenhouse, or, if the weather is fine, place them out on a south border out of doors; and, as winter advances, diminish the quantity of water till they become quite dry. They remain in the greenhouse at rest till they are required for forcing.

Those required to flower first are removed back to the stove early in spring. As soon as they have matured the first growth, place them in any exposed part of the garden. This change causes them to set flower-buds at the point of every shoot. As soon as the flower-buds are well established, place the plants in a warm shady part of the greenhouse, where they will flower profusely by the early part of October.

By removing the plants successively from their winter quarters to the forcing-house, and treating them as above mentioned, a succession of fine plants can be kept in bloom from October to March.

To those who esteem a collection of winter flowers, nothing can be more desirable than this Epiphyllum truncatum, E. violaceum, and E. Russellianum, grown in the same manner.

CHOICE VARIETIES OF FLORISTS' FLOWERS.

RANUNCULUSES.

BY OBSERVER.

It is an oft-repeated inquiry of amateurs, in our floral periodicals, which are the best twenty-four or thirty-six varieties of a certain favourite flower? and though the replies of experienced cultivators are at all times valuable, yet a better, because a more public and impartial test of merit, is to be found in the reports of the winning flowers at any of our great horticultural and floral exhibitions. As this is the season for planting Ranunculuses, it may be useful to your readers to inform them that the following twenty-four sorts obtained the large silver medal at the Chiswick show, held June 13, 1846. The stand was from Messrs. Tyso, of Wallingford.

Alexis (Tyso's), yellow ground, brown spot, distinct and fine.
Attractor (Tyso's), white ground, large, heavy purple edging.
Burns (Waterston's), white ground, light purple edging.
Charlotte (Bartlett's), white, with delicate rosy mottling, fine form.
Champion (Tyso's), white ground, purple edging, large flower.
Creon (Tyso's), pure lemon ground, with dark coffee edging.
Delectus (Tyso's), rich yellow, with delicate red margin.
Flaminius (Tyso's), fine yellow, with distinct bright spot.
Gozan (Tyso's), buff ground, scarlet edging.
Glenelg (Tyso's), clear yellow ground, coffee spot.
Lydia (Tyso's), yellow ground, heavily mottled with scarlet, extra fine.
Lelex (Tyso's), yellow ground, good spot.
Marquis of Hereford (raiser unknown), rich crimson.
Pasca (Tyso's), white ground, rosy mottling.
Pavia (Tyso's), cream ground, purple spot.
Poliander (Tyso's), yellow ground, distinct spot.
Queen Victoria (Kilgour's), white, finely edged with purple, large.
Sobraon (Tyso's), new dark crimson.
Serena (unknown), cream, carmine spot.
Sophia (unknown), cream ground, rosy edging.
Sabina (Costar's), yellow, fine full flowers.
Speculator (Costar's), cream ground, with scarlet mottling.
Tippoo Saib (Costar's), rich dark self.
Victor (Tyso's), fine dark plum colour.

COBEA SCANDENS.

BY G. L., PORTSMOUTH.

To any of your readers who may wish for a quick growing creeper I can strongly recommend the Cobœa Scandens; it has covered a veranda 40 feet long the second year of its growth, in fact it grew so luxuriantly that I was obliged to cut away much of it; it bloomed beautifully the whole autumn, and has also fruited and ripened seeds. It stands the winter, too, very well here.

CROWNS OF FLOWERS.

In distributing rewards, and in conferring honours, nature is most commonly appealed to. The poets were crowned with bays, the victor with laurel. In Salency, a small village in Picardy, there still remains an interesting and a highly useful and moral custom; it is called "The Festival of the Rose." On a certain day of every year the young women of the village assemble, and after a solemn trial before competent judges, the one who has conducted herself most discreetly, and gives the most affecting proofs of the general innocence and simplicity of her character, is decorated with a crown, which thenceforward becomes an object of pride to all her family. This crown is a hat garlanded or wreathed with roses. It frequently constitutes the whole wealth of the wearer, but the instances are far from unfrequent in which it has been esteemed the most honourable recommendation to a wealthy suitor. This custom was instituted by St. Medard, in the fifteenth century.

ROOT GRAFTING.

This operation (says a correspondent of the *Gardeners' Chronicle*) is performed in two ways, either by grafting on the already established roots of young plants or on pieces taken from the roots of older ones; but much depends upon circumstances and the kinds of plants to be operated upon as to which is the most suitable plan. The former is the easiest method for obtaining strong plants, and is best suited for Conifers and such-like plants, in which the stem or trunk is an object.

In grafting upon already established roots of a young plant, first clear the soil away from the collar or neck of the plant intended for the stock, and cut the head off as much below the surface of the soil as possible, but at the same time observing that a sufficient length of the neck or collar must be left to receive the graft. The graft should be cut wedge-shaped, and inserted in the slit or crown-graft method, tied tightly with a soft worsted thread, and afterwards covered with the soil, leaving only a portion of the graft exposed to light and air. It will greatly increase the chances of success if the worked plants can be kept close, and in a rather moist atmosphere for a few days, until they commence growing, but much depends upon the operation being performed at a proper time and season, which, in most cases, is just before a new growth commences.

In grafting on pieces of roots taken from an older plant, such pieces should be selected as are of sufficient size to receive the scion, and also such as have some small fibres attached to them. In grafting, the roots may either be at once worked and afterwards potted or planted, or the roots may be potted a short time previous to being worked, and afterwards worked like those of the preceding ones, and then treated according to the nature of the plants to which they belong, whether stove, greenhouse, or hardy; but even plants belonging to the latter class are the better for a gentle moist heat for a few days to start them.

In this way many kinds of plants may be increased, such as Clematis, Berberis, Roses, Combretums, Moutan Pæonies, &c., where the roots of the more common kinds are more easily procured, and where suitable accommodation can be afforded; but under ordinary circumstances the chances are very great against the success of the system, and it should only be resorted to by the amateur in the case of very rare and curious plants.

THE AMARYLLIS:

ITS CULTURE FOR WINTER DECORATION.

BY MR. FREDERICK THORNE, FAIRFORD PARK.

AMONGST all plants chosen for decoration during winter, none, in my opinion, are superior to this beautiful tribe, when highly cultivated. Their flowers are mostly richly coloured, large, and particularly ornamental. The possession, too, of half a hundred bulbs will afford certain succession of bloom from the first week in December until April.

The mode of procedure I adopt, and which has afforded gratifying and uniform success for many years, is to raise the plants from seed saved from *Amaryllis alba striata*, *A. glaucescens*, and *A. Johnsoni*. I am careful not to gather the seed until it is perfectly matured, and then it is sown immediately in shallow pans, in a mixture of fine leaf-mould and sharp sand. Upon the top of each pan I place a piece of glass, on which a thin layer of moss is added. This serves to keep the soil continually moist, a point necessary of attention. The pans are then removed into a temperature of about 70°. As soon as the plants have formed little bulbs they are transplanted into two-inch pots, returning them again into the stove to a situation where they can receive a little bottom heat. Subsequently they are re-potted into the next larger sizes, as their increased growth indicates that operation to be necessary. In this manner the plants are grown until they have attained the required size for their final shifting into seven-inch pots, to accomplish which object I allow them two years.

At the end of the first season's growth I give the bulbs a rest for three months, retaining them the while in the stove. Returning growth is induced early in the month of February in the following year, and by the end of autumn the bulbs will have become sufficiently matured to produce bloom in the succeeding winter. I force them as required, and for five successive years they grow luxuriantly without being re-potted. I find it merely necessary to give a top-dressing of fresh soil and elevate the bulb a little if requisite. My motive for confining the roots within seven-inch pots is to permit the plants, when in bloom, being conveniently placed in a basket in the drawing-room, and the roots becoming fully established in these pots, or pot-bound as it is termed, I find the production of flowers greatly augmented. Of course, when fine specimens of growth is the object in view, larger pots must be had recourse to.

By long experience I find the following compost most suitable to Amaryllids, viz., two parts of strong loam, one part of rotten leaf-mould, and another part of sharp sand; to these I add a small portion of charcoal and a few pieces of broken pot, about the size of marbles.

When the plants are in bloom they may, if desired, be removed from the stove into the conservatory, which their gay appearance will greatly enliven. They ought, however, immediately their blooms are faded, to be returned to their old situation in the stove, there to remain until the middle of September, water in the mean time being gradually withheld from them. The pots can then be stowed away in any dry spare corner of the stove, until again required for forcing.

DESTRUCTION OF APHIDES.

DANGER IN USING TOBACCO-WATER.

BY MR. THOMAS CONNELLY, GARDENER TO T. R. BRIDSON, ESQ., OF BRIDGE HOUSE, NEAR BOLTON, IN LANCASHIRE.

THE green fly, as it is termed, is throughout the year a troublesome pest, particularly to Pelargoniums. Having recently obtained some choice sorts, they were placed in the hothouse, and soon pushed forth shoots. Very quickly, however, they were covered with the fly. Syringing the plants over with tobacco-water having been recommended in several places in the CABINET, I was induced, unfortunately, to apply it to my plants.

The directions given in the notices referred to were strictly adhered to, viz., " half a pound of tobacco being placed in a vessel, and boiling water poured over it," which was finally so reduced in its strength, by addition of water, as to prevent any apparent possibility of harm accruing from the liquid being too powerful. With this infusion the plants were syringed, and the insects were immediately destroyed. The plants, however, soon looked sickly, and began to shrivel. On taking them out of the pots, I discovered that the fine roots, which, previous to syringing, were proceeding rapidly, were killed, and the plants died. What could cause this disaster but the liquid sinking into the soil in which the plants were growing. How the sort of tobacco I used is prepared I am ignorant of, but it is said that copperas and other poisonous ingredients are employed in its manufacture. Now, whether this be correct or not, to me it appears that the old method of fumigation is far preferable. It is admitted that, by this latter process, a few leaves occasionally are injured, such as those of the Gloxinia, Heliotrope, &c., but such are readily removed, and to no disadvantage to the plant, at all events not to be compared with the new and destructive mode of applying tobacco-water; besides, by the method of fumigation, every crevice, under and above, of the leaves, &c., is acted upon, which cannot be the case by syringing. The difficulty, with some persons, may arise from not knowing how much must be used in fumigating; the following I have always found successful, viz., one pound and a half of tobacco-paper consumed will entirely free a house thirty feet long from these voracious, pestiferous insects. I hope that this communication may be a caution to all in a similar situation to what I, in the first instance, was, and induce them not to syringe with tobacco-water, but fumigate—fumigate.

VEGETABLE PHYSIOLOGY.

ORGANS OF FRUCTIFICATION.

BY MR. JOHN TODD, DENTON GARDENS, NEAR GRANTHAM.

THE chief object of the growth of plants appears to be the maturation of seed in the end, in order that new individuals can be raised to supply the places of those which are necessarily appropriated to the sustenance and necessities of innumerable races of animated beings, or swept away by the inevitable consequences of old age, death, and decomposition. Suckers, runners, and offsets are incidental modes of natural propagation; chiefly, however, the unbroken succession of plants is due to their capacity of giving birth to seeds. These are engendered in the ovarium by the natural action of those delicate and beautiful organs the stamens and pistils, whose ingenious construction and admirable adaptation to the grand end in view are legitimate subjects for the investigation of the gardener, and well deserving his attentive study.

It is only in the higher grades of vegetable life that we find a sexual apparatus designed exclusively for the generation of seed; the reproduction of Cryptogamous plants is effected by a much less complicated though no less efficient means. Ferns, and others of the more highly developed Cryptogama, are multiplied by spores, produced in little cases on the under surface of their leaves (fronds), which, when ripe, split open, and allow the fructifying matter to escape. The reproduction of Fungi is still more simple, whilst the whole substance of the lower forms of Algæ seems to dissolve into myriads of minute gems, each capable of giving birth to a being like its parent.

In treating of the fructifying process in Phænogamia, or Flowering Plants, the structure of the flower will have to be considered. A flower, when perfectly developed, is composed of the following parts—calyx, corolla, stamens, and pistil; and one or more of these parts are present in every flower. The calyx is the exterior portion of the flower, and usually consists of one or more leaflets or sepals, serving as an envelope and protection to the tender flower-bud, and very probably yields to the flower a portion of elaborated food, both before and after its expansion. In immediate contact with the calyx, and between it and the stamens, we find the corolla the most conspicuous, and, it may be added, interesting portion of the flower, for its varied tints and agreeable fragrance have ever been a source of pleasing admiration. Its brilliant colours and honied secretions serve as a decoy to innumerable tribes of insects, which alight upon its anthers and scatter the fertilizing powder with their legs and wings, and thus assist in the work of impregnation. Apart from this, the utility of the corolla seems to be identical with that of the calyx, for, although it is absent from many of the flowers, " yet, if removed from those possessing it before impregnation is completed, fertilisation never takes place."

Within the beautiful corolla are observed a number of delicate filaments, mounted with orange, purple, or whitish-coloured bodies, often so nicely poised as to be susceptible of the slightest breeze. These constitute the male system of a flower, and are called stamens. The little objects crowning their filamentous (thread-like) portion are known as the anthers, and generally consist of two parallel lobes or cells, which, when the anther is ripe, open, and permit the dispersion of the fertilising powder, or pollen, from within. The pollen is sometimes white, red, blue, brown, but most frequently of a yellow colour. It consists of exceedingly minute particles, of regular form and texture, the number of which in one anther is almost incredible; in Cereus grandiflora, Morren counted five hundred, but in others they not unfrequently amount to many thousands. There is a circumstance connected with the opening of the anther which must not be silently passed over, because it not only serves as a beautiful specimen of mechanism, but also points out the necessity of regulating the hygrometric condition of the atmosphere during the fecundating process. The anther cells are lined with an exceedingly delicate and highly elastic tissue, which forms an infinite multitude of little springs, that, when dried by the absorbent properties of the pollen grains, contract and pull back the valves of the anthers, by a powerful accumulation of forces which, individually, are scarcely appreciable; so that the opening of the anthers is the result of the maturity of the pollen. Now it is a well-known fact that all fruits ripen much earlier, and in greater perfection, in an atmosphere containing little or no appreciable amount of moisture than in one highly charged with humidity; therefore, in drawing an analogy, it may reasonably be presumed that the fecundating powder of the anther will do so too. And this we find to be the case, for though vines delight in a humid medium before and after impregnation, yet their blossoms never set so kindly as in an atmosphere of comparative dryness.

(*To be continued.*)

LANTANA MUTABILIS.

This is an old inhabitant of our stoves and warm greenhouses, and has long been admired therein. It has recently been cultivated in the open flower-beds in summer, and proves to be a most beautiful and attractive object.

The plant will bloom very profusely at any size desired, and forms a neat bush. It usually grows from one foot to one and a half high. The flowers are produced in corymbous heads, in immense profusion; and are of very distinct delicate white, yellow, and rose in each head of blossoms.

It deserves to be in every flower-garden, either as a single ornament or grown in masses. The flowers are produced much larger out of doors than in the house. *L. Sellowiana* is also well adapted for the open bed in summer, and as a dwarf plant is a handsome companion to the Verbena, &c. It does remarkably well, too, as a rock-work trailer, its rosy-purple flowers producing a pleasing effect.

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

LAST month was the proper time for grafting shrubs, ornamental kinds of trees as Thorns, Limes, &c., but the severe weather being more protracted, such sorts as have been omitted may still be done, but the earlier the better. The increase of Shrubs, &c., by layering, should be done as early as possible, such as Rhododendrons, &c.

Annuals, hardy, such as Clarkia, Nemophila, Larkspur, &c., may be sown in the open bed. The best method of sowing the small seeds in patches is to have a quantity of finely sifted soil, spread a portion where desired; after scattering the seeds sprinkle a proportionate portion over, and then press it closely upon them, which will assist a more early and certain vegetation. If strong frost occur, it is advisable to cover a garden pot over during the night and remove it in the morning. Seeds of *Biennials* too should now be sown in beds, such as Hollyoaks, Sweet Williams, Scabious, Canterbury Bells, &c. Also seeds of *Perennials* as Phloxes, Campanulas, &c. Newly budded trees, that is those budded last season, should be looked over, and if any portion of the stock be pushing shoots they must be rubbed off so that the entire strength should go to the new shoot engrafted.

AURICULAS.—Give air freely on all suitable occasions, to prevent the flower stems being drawn up weakly. They must, however, be protected against strong wind and dust. By the end of the month the blossoms will be opening, no water must be allowed to fall upon them, and they must be shaded from hot sun by canvas. A stage of shelves inclosed in a wooden frame or similar provision, having the bottom shelf two feet or so high, and gradually rising, &c., also to be properly shaded, is an erection indispensable to showing them to advantage.

POLYANTHUSES too require similar attention to the Auriculas. Neither kinds should be allowed to droop for want of water, and the stems, if by casualty are too weak to sustain the truss, must be supported by a neat stick, &c.

PINKS.—If beds of them were not made in autumn and omitted too last month, they ought to be done immediately, if required to bloom the coming season. A loamy soil, made of turfs a few inches thick and well rotted, with an equal portion of old decayed cow-dung, is admirably adapted for their growth. It should be nine inches deep, and have a good drainage below. The plants must be removed with as much of the ball of soil as possible, and be planted six inches apart. High raised beds are not beneficial except in low wet situations. Where a compost, as above, is not at hand, six inches thick of old cow-dung should be dug in with common garden soil.

RANUNCULUSES and ANEMONIES.—When the plants make their appearance and are risen an inch or two high, care must be paid to have the soil pressed closely around them with the hands, stopping up any holes made by worms, &c. A top dressing too of rich compost, free from wireworm, is very beneficial. If common large worms exist in the bed, they may be collected by the hand at night. If allowed to remain they are very injurious. Showers of rain are very beneficial for their growth; if none fall, occasional watering, with soft water, should be given. Well-water is injurious. Weak manure water occasionally poured between the plants contributes to vigour. If severe frost should occur, cover at night.

TULIPS.—Stir the surface of the bed an inch deep. Protect from frost, and strong wind, also from the mid-day sun, say from ten till four o'clock.

CARNATIONS and PICOTEES.—If not potted off the end of last month, they should be done immediately. See last month's Calendar for compost, &c.

HYACINTHS should be protected from frost, sun, and wind; secure by tying to proper supports. Stir up the surface soil.

PANSIES in beds must have the soil pressed around the plants, and a top dressing of rich soil an inch or two thick will be beneficial. New beds of them should also be planted.

CHRYSANTHEMUMS.—Procure pieces of the shortest of the young shoots from the base of the old stems, with as much root as practicable; pot them in very small pots, and place them on a gentle bottom heat till they are well rooted; then gradually harden them, and pot them on during the summer according to the size the plants are required. You may do this as soon as you please. If there are not short pieces, take off the tops of the shoots and plant them as cuttings.

IN THE FORCING FRAME.

Balsams, Cockscombs, Globe Amaranthuses, &c., that require potting off, or re-potting should be duly attended to; also Thunbergias, Browallias, Lobelias, Brachycoma, &c. Seedling Fuchsias, Verbenas, Petunias, &c., should be potted off singly. Dahlias too should be placed so as not to be drawn up weakly. Achimeneses must be potted off singly. See Articles on Culture in previous Numbers.) Tender Annuals as Stocks, Zinnias, &c., should be placed in a cool frame or pit to prevent them being drawn up weakly. Where it is practicable to prick out such as Stocks, Asters, &c., upon beds, and protect with frames, it should be done, it gives a robust growth to them. Cuttings of Fuchsias, Petunias, Verbenas, and many other greenhouse plants should now be put off.

IN THE COLD FRAME, GREENHOUSE, &c.

Admit all the air possible. Re-pot Lobelias, Figridias, Geraniums, Verbenas, and other similar plants for beds. All other kinds of plants requiring re-potting should now be done, (see compost, &c., in last month's Calendar). Such as are straggling, &c., should be cut in to render them bushy. Camellias, when done blooming, examine the roots and, if necessary, re-pot, (see Articles upon, for soil, &c.,) then place them in a warm part of the greenhouse, or forcing house, giving due attention to watering, &c., till the wood is firm and flower-buds are set, they may then be removed to a cool pit, so as to be gradually hardened by more air, &c. Japan Lilies, &c., should be duly encouraged by re-potting, &c. Peat soil and sand is what they flourish in best.

IN THE STOVE.

Clerodendrons, Erythrinas, Eranthemums, Justicias, Gloriosas, Brugmansias, and similar plants should be hastened on duly, to have a fine display, and fit them for exhibiting.

THE CROCUS.

No flower is so sensible to the effects of light and heat as the Crocus. Its petals expand during the day, and close at night; but they will expand at night under the influence of a lamp or candle; or if placed within the influence of the heat of a fire, though shaded from the light of it, the petals open as readily as they do in bright light.

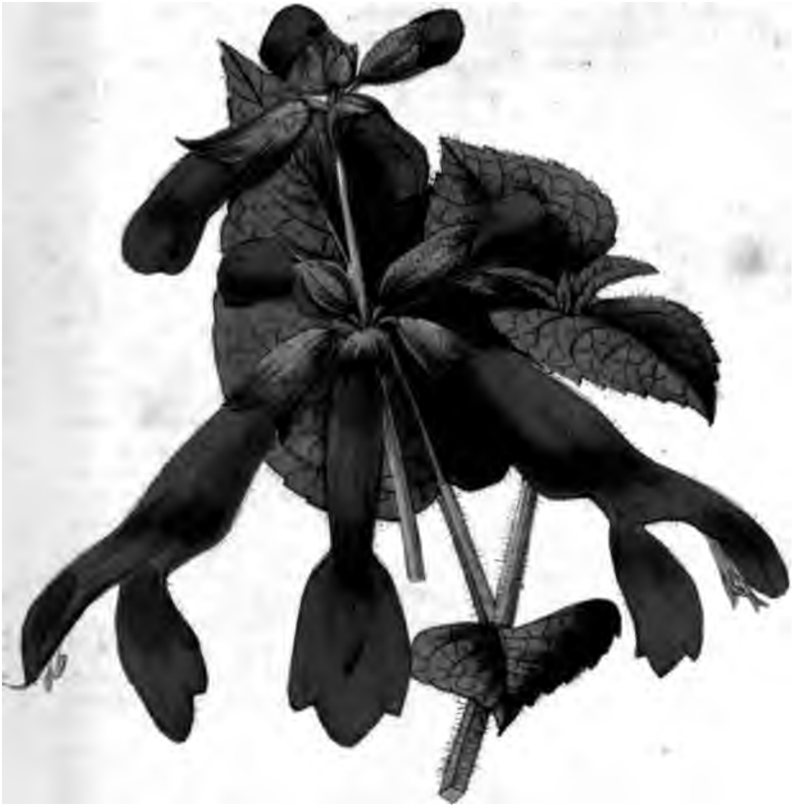
BRIEF NOTES AND CORRESPONDENCE.

Camellias for Stocks.—*J. B.*—The Camellia reticulata you will find very eligible for this purpose, on account of its strong growth. It is a kind, too, that succeeds better itself if grown upon its own roots, the stocks upon which it is worked being considered incapable of supporting it in vigour.

Superphosphate of Lime as Manure.—*J., Wild.*—A remark, worthy of your particular attention, and those who receive foreign seeds, is made in the Horticultural Society's *Journal*, that, if a small portion of superphosphate of lime is mixed with seeds when sown, in sufficient quantity to give them the appearance of being limed over, the seeds germinate quicker and stronger, more especially in the case of old seeds; and also that the plants are less liable to damp off, or be injured by insects. Try it. From some experiments we have made, we have no doubt that this substance will be found to have peculiar influence in causing an early and abundant formation of roots, and if a small portion be sprinkled in the soil into which shrubs or trees are transplanted, it will be found of much utility in preserving life.

The Weeping Willow.—It is said that the Weeping Willow was introduced by Pope, and that the celebrated tree which stood in the poet's garden, at Twickenham. was raised from a cutting, forming part of a basket or package sent from Spain, On the arrival of the basket, Pope observed apparent life in some of the twigs, which he accordingly planted, adding, "perhaps they may produce something we have not in England." From this sprig sprung up one of the finest specimens in this country, celebrated as the "Poet's Willow," which soon became the grandsire of thousands.

Aphelexis.—*W. Dawson.*—To grow this tribe of plants vigorous they require a rich turfy sandy peat. If the peat be poor, one-third of rich sandy loam should be mixed with it. They should be re-potted, having a free drainage, when the blooms are fading, about July. Then be placed in the open air, sheltered from wind and mid-day sun. At the end of September, they should be housed again, placing them in an airy, dry, situation in the greenhouse. When they begin to grow in spring, give them, occasionally, manure water. If straggling shoots be cut in, they push lateral ones, so as to enable you to have the shrub compact.



Salvia gesneriaeflora.

MAY, 1847.

ILLUSTRATIONS.

THE Salvia, or Sage, comprises plants of our own country, but there have been more than 130 other kinds, introduced from other parts of the world. The first of these of which we have any positive account is the S. Æthiopia, a native of Austria, which was introduced in 1570. Out of the 130 kinds we now possess, 70 of them have been sent us since 1800. All of the Salvias are both interesting in the form of the flowers and handsome, more especially the later introductions, some of which are splendid ornaments both to the conservatory and greenhouse; also highly gorgeous for the flower-garden, and as they bloom from early spring to the end of autumn, and one or two sorts will bloom the entire year, they are exceedingly valuable, and well merit cultivation. From South America, Mexico, and other parts, many kinds have been obtained; and the species we now figure,

SALVIA GESNERIFLORA—Gesnera-like flowered,

is perhaps the most beautiful of any of its predecessors. The plant is shrubby, forming a very handsome bush, which is readily induced to bloom at any desired size, from half a yard to three feet. It blooms very freely, and its rich coloured flowers produce a splendid display. It is easy of cultivation, increases readily, and grows quickly. We have not seen it in bloom anywhere, before our own plants, which have been in fine blossom since March. The plant deserves to be in every conservatory, greenhouse, and flower-garden.

NOTES ON NEW OR RARE PLANTS.

ANDROSACE LANUGINOSA—SHAGGY-LEAVED.

Primulaceæ. Pentandria Monogynia.

A hardy perennial plant, most suitable for rock work. It spreads around, covering the same with a delightful mantle of foliage, and its numerous terminal heads of many-flowered umbels. The flowers are rose-coloured with a golden eye, a separate blossom being about a quarter of an inch across. It is in the London nurseries, and to be procured at a trifling cost. It blooms from July to the end of the summer. Figured in *Pax. Mag. Bot.*

ANGRÆCUM FUNALE—CORD-LIKE ANGRÆCUM.

Orchideæ. Gynandria Monandria.

It was discovered in the mountains of Jamaica, growing on the trunks of trees, by Mr. Purdie, the collector employed in connexion with the Royal Gardens of Kew. The flowers are produced upon long bending roots, about as thick as a goose-quill, from which rise short peduncles, each bearing one flower, or, occasionally divided, two flowered. A separate blossom is about two inches and a half across. Sepals and petals a pale green. Lip large, white with a yellow margin. They are highly fragrant. Figured in *Bot. Mag.*, 4295.

ANIGOZANTHOS FULIGINOSA—SOOTY ANIGOZANTHOS.

Hemodoraceæ. Hexandria Monogynia.

Mr. J. Drummond, in the "London Journal of Botany," states,—"By a ship now about to sail I send two fine species of Anigozanthos, collected by my son (since killed by the natives), in the vicinity of the Moore River, in the Swan River settlement. The dark flowering one, *A. fuliginosa*, of which but two specimens have ever been found in bloom, is a real mourning flower, the upper portions of the stem and lower part of the corolla being covered, as it were, with black velvet; the corolla is deeply cleft, and expands about two inches, lemon-coloured. The flower stem rises from two to four feet high, and bears a large spike of blossoms. It is a fine plant for the greenhouse. It has not yet arrived in this country. Figured in *Bot. Mag.* 4291.

AQUILEGIA JUCUNDA—JOYOUS COLOMBINE.

Ranunculaceæ. Polyandria Pentagynia.

It is a native of the mountains of Siberia, a hardy perennial, differing from the common *A. glandulosa* of the gardens in its much dwarfer habit, the flowers being a much brighter blue, and in its very glaucous round foliage. It is a very desirable plant for the flower-garden, and easily increased, grows about a foot high. May be obtained at the nursery gardens cheap.

CÆLOGYNE SPECIOSA—THE SHOWY.

Orchideæ. Gynandria Monandria.

Mr. Lobb, the collector to Messrs. Veitch's, sent this species from Java in October, 1846. Each flower stem rises about four inches high, terminating with a single flower about four inches across. Sepals and petals a pale tawny colour. The lip is a pitch brown colour, with a pure white termination to the lip, which is broad. The large size and very striking contrast of the colours render the flowers very interesting. Figured in *Bot. Reg.*

ÆCHMEA DISCOLOR—TWO-COLOURED, OR CRAB'S EYE.

Bromeliaceæ. Hexandria Monogynia.

A native of Brazil, and is in the stove collection at the Royal Gardens of Kew. The leaves are like the Pine Apple plant. The flowers are produced in a large panicled spike, the stems being of a rich coral red, and the flowers of a bright vermilion colour, having the calyx tipped with a very striking deep black, giving the whole a very singular and pretty appearance. Figured in *Bot. Mag.* 4293.

EDGWORTHIA CHRYSANTHA.

A deciduous shrub, producing bunches of yellow sweet-scented flowers, from Chusan, &c. This is a dwarf soft-wooded shrub, throwing up rod-like dull green stems from its base, and bearing the leaves exclusively near their ends. The leaves are about eight or nine inches long, oblong-lanceolate, stalked, very dull green, and covered with fine hairs, so small and closely pressed to the surface that the naked eye fails to discern them. The flowers have not yet been produced in England; but Mr. Fortune's Chinese drawings and specimens show them to be bright golden yellow, something less than an inch long, covered with exceedingly thick air on the outside, and collected into balls about two inches in diameter at the ends of the shoots, that they are sweet-scented, and appear in Chusan in July.

The species is allied to Edgworthia (or Daphne) Gardneri, a Nepal plant with a similar habit, from which it differs in having longer and more slender flowers, larger flower-heads, and a much more silky hairiness on the outside of the flower. It is a green-house or half-hardy shrub; it grows freely in a compost of three parts sandy loam, and one of turfy peat. A free drainage is necessary, for although it requires an ample supply of water during the summer months it is liable to damp off if this point is not properly attended to. For a few weeks in winter very little water is required. Being sweet-scented and a plant of free growth, it may be expected to prove a useful addition to our green-house or half-hardy plants belonging to the natural order of Daphnads.

ERIOPSIS BILOBA—TWO-LOBED.

Orchideæ. Gynandria Monandria.

It was discovered in the collection of the late Mr. Barker, which was purchased by J. J. Blandy, Esq., of Reading. It is of the Maxillariads. The flowers are produced in long spikes of a rich orange colour margined with red. Each separate blossom is about three quarters of an inch across. It is a very pretty and interesting species. Figured in *Bot. Reg.* 18.

GALEANDRA BAUERI—BAUER'S CASQUE-WORT.

Orchideæ. Gynandria Monandria.

A native of Mexico, bloomed in the collection of Messrs. Loddiges. The flower stem is about six inches long, and produces a large drooping panicle of flowers. The sepals and petals are a light brown colour. The lip is funnel-shaped, having much the appearance of a moderate-sized Gloxinia flower. The tube, outside white; inside yellow. The mouth broad, of a beautiful plum colour, with a dark rim next the yellow. It is a very pretty species. Figured in *Pax. Mag. Bot.*

MARTYNIA FRAGRANS—THE FRAGRANT-FLOWERED.

Sesameæ. Didynamia Angiospermia.

In the spring of 1846 capsules of seeds were sent to the Royal Gardens of Kew, and the plants raised were treated as half-hardy, and in the cool greenhouse bloomed freely, and were universally admired both for the large highly coloured flowers and their delicious fragrance. Each blossom is as large as a medium sized Gloxinia, of a rich purplish-red, the throat yellow with dark spots. From four to six blossoms are produced in each panicle. It highly merits to be grown in every greenhouse, and as it is very likely to bloom well in the open border in a sheltered warm situation; a bed of it would form a very beautiful object. Figured in *Bot. Mag.* 4292.

PORPHYROCOME LANCEOLATA—LANCE-LEAVED.

Acanthaceæ. Didynamia Angiospermia.

It is a stove perennial plant, of some beauty, and deserves to be grown in every hothouse or warm greenhouse. The plant has somewhat the appearance of Justicia speciosa. The flowers are produced in large terminal heads, the bracts inclosing each separate blossom are of a reddish-purple, and the corolla of a rich blue-purple colour. Plants raised by cuttings almost immediately after potting show bloom, and are thus prevented growing, but when raised from the seed we find the plants soon make fine specimens. Figured in *Pax. Mag. Bot.*

SPIRÆA PRUNIFOLIA, PLENO—DOUBLE-FLOWERED.

Rosaceæ. Icosandria Di-pentagynia.

This is a very distinct and remarkably pretty variety with *double flowers*. It was first introduced by Mr. Fortune to the garden of the Horticultural Society, and plants have recently been distributed by M. Louis Van Houtte, of Ghent. We have plants at this time profusely in bloom, and which have a very neat appearance. The flowers are produced in rather close racemose corymbs, pure white in colour, each being rather more than a quarter of an inch in diameter, and quite double. It will no doubt, as it deserves, soon be generally grown.

TIGRIDIA CONCHIFLORA VAR. WATKINSONI — MR. WATKINSON'S TIGER FLOWER.

Iridaceæ. Monadelphia Triandria.

This beautiful hybrid was raised by Mr. Horsefield, of Whitfield near

Manchester. It was produced by seed from the T. conchiflora, impregnated by T. pavonia. The flower is most like T. conchiflora, but a deeper orange-yellow, and the darker spots too of the centre. It is a very free bloomer, and, like the two parents, deserves to be grown in every flower-garden.

VANDA LOWEI—MR. LOW'S VANDA. Stove Epiphyte.

This very extraordinary plant has been found in Borneo by Mr. Hugh Low, jun., by whom it has been sent to England. The following account of it is given in a letter from this gentleman, dated Sarawak, January 12, 1846:—" At the time I formerly sent it to you I remember having said that I expected something very magnificent in its flower, and sure I am that when it produces its spikes of flowers in England it will be the admiration of all cultivators, probably beyond any Orchid that has ever yet appeared. As I saw it nothing could have exceeded it in beauty; about 200 of its branches were hanging horizontally from the main stem of a large tree, from each of which depended two, three, or four chains of flowers, each ten feet in length, and sometimes twelve feet. The individual flowers are upwards of three inches in diameter. When they first open the ground colour is pale lemon-yellow, barred and blotched with bands and spots of the richest cinnamon; as they become older the cinnamon colour gradually diminishes in size; the yellow becomes richer and more brilliant, and takes the place formerly occupied by the more dull but not less rich tint; the stem and foot-stalks of the flower are covered with a rich downy coating of moss, similar to that of the Rose; the labellum is shaded cinnamon and purple; the leaves are of a light green colour and leathery texture, similar in shape to those of Aerides odoratum, as far as I recollect, but more stiff and erect; the whole habit of the plant is as neat as the rest of those of the same tribe. The roots are large, but by no means so thick as in some of the continental Indian Vandas. It delights in high trees on the banks of rivers, thick forests, and other humid places." Mr. Low begged that it might be called Vanda Lindleyana, under which name it has already become known to a few persons; but as it had never been before described, Dr. Lindley took the opportunity of transferring the name to its discoverer, who certainly ought, before all others, to be associated with one of the finest plants which he has discovered in that interesting but dangerous island in which his researches have been so diligently prosecuted. We have a specimen of this plant now before us, preserved in spirits, and we are thus able to verify Mr. Low's dimensions. The flowers are more than three inches in diameter and spread quite flat, and the space from flower to flower is about five inches. The " rich downy coating of moss," of which Mr. Low speaks, is formed by curious short hairs, whose sides are studded with irregular microscopical spines, and must add much to the beauty of this most singular plant.

THE HAWTHORN AND ITS VARIETIES.

BY AN ARDENT ADMIRER.

THE garland of Flora does not possess a more charming blossom than this British hedge beauty; nor do the most luxurious spices of Asia give a more grateful perfume than this sweet flowering shrub presents.

It is said that the hawthorn flowers not only regale the spirits by their odour, but that they have the power also of counteracting poison. It has been made the happy emblem of hope, because the young and beautiful Athenian girls brought branches of hawthorn flowers, to decorate their companions and friends on their wedding day, whilst they carried large boughs of it to the altar. The altar of Hymen was lighted with torches made of the wood of this tree, and it formed also the flambeau which lighted the nuptial chamber.

Diodorus, a Sicilian historian, who flourished about forty years before the Christian era, tells us the Troglodites, when they interred the corpses of their friends and parents, tied branches of hawthorn to their bodies; and then, laughing, strewed the body first with the branches of this shrub, and afterwards with stones, until it was covered. These simple people considered death as the morning of life, where they should never separate. Happy hope! which gave the Troglodites immortality, and the Grecian youths fond of marriages; may you, likewise, ever be the prop of the afflicted, and those whose friends

> " ——— " When they once perceive
> The least rub in your fortune, fall away
> Like water from you, never found again
> But when they mean to sink ye."

Religion, which was given to bless mankind with cheerfulness and hope, has always been converted by the crafty, in ignorant ages, into rods of terror and torches of superstition; and they did not fail to seize upon the hawthorn bush as an instrument with which they might impose on the credulous; thus, in some parts of France, the country people affirm to you in good faith that the hawthorn groans and sighs on the evening of Good Friday, and on this superstition they have made it the emblem of lamentation. There are others who gravely adorn their hats with a bunch of hawthorn, in the belief that during a storm the thunder will not dare to reach them, from respect to their head-dress. It is also related, that on the morning following the horrible massacre of St. Bartholomew a hawthorn was seen to blossom in the church-yard of St. Innocent, in Paris, which is now converted into the hall or great market. It is hardly necessary to state how differently the two parties interpreted this phenomenon.

We have also our Glastonbury thorn stories, to match those of our neighbours. Sanctified deceit affirmed, that this thorn was the identical staff of Joseph of Arimathea, the counsellor who buried Christ; who, according to the tradition of the abbey of Glastonbury, attended with twelve companions, came over into Britain, and founded in honour of the blessed Virgin the first Christian church in this island. As a proof of his mission he is said to have stuck his staff in the ground, which immediately shot forth and blossomed; and the vulgar for a long time believed that this tree blossomed annually on Christmas-day.

The Glastonbury thorn is a variety of the common white thorn (Oxycantha), which blossoms in the winter about January or February, and sometimes even as early as Christmas.

It is often called white thorn from the colour of the flower-petals, May-bush from blossoms appearing in that month, and which were more noticed in old times before the country was embellished with so many early blowing shrubs; for on the festival of Flora, on the first of May, our ancestors never failed decorating with it the May-pole, which was permanently fixed in or near every town and village in the kingdom, and the boldest youth climbed to fix the garland of flowers on the top, whilst others less courageous hung festoons and wreaths of flowers through the garland, or twined them around the pole,

> "To fetche the flowers fresh, and branch and blome,
> And namely, hawthorn brought both page and grome,
> With fresh garlandes, partly bleu and white;
> And then rejoysen in hir grete delite."
>
> *Chaucer.*

A king and queen were then elected, who regulated the entertainment, and settled disputes; the former was distinguished by an oaken wreath, and the latter by one of hawthorn; when dancing and other rural sports took place in honour of the goddess. This rustic amusement was evidently introduced by the Romans; in their ancient games that of Floralia were instituted in Rome as early as the time of Romulus, and which the Phoceans and Sabines observed even in earlier days. As Rome became degenerated this feast was turned into scenes of the most unbounded debauchery and licentiousness, and it is related that Cato wished once to be present at the celebration, but when he saw that a deference for his presence interrupted the feast he retired, not choosing to behold the indelicate spectacles that were about to take place in public. This behaviour so captivated the degenerate Romans, that the venerable senator was treated with the most unbounded applause as he retired, which shows that virtue and modesty are always respected even by vice itself.

At the present time there is not a door in Athens that is not crowned with a garland of flowers on the 1st of May, and the youth of both sexes, with the elasticity of spirits so characteristic of a Greek, that when under the power of the Turks they forgot or braved their masters, while with guitars in their hands and crowns upon their heads,—

> "They lead the dance in honour of the May."

Religious devotees call it the noble thorn, from a belief that it was this thorn which formed the crown of Christ.

The hawthorn branches are scarce less gaily besprinkled by Flora in the spring, than adorned by Pomona in the autumn, who nourishes the feathered choristers with these scarlet haws, and on this account we should have in our shrubbery

> ——— "berry-bearing thorns,
> That feed the thrush."

And none should omit

> "The hawthorn bush, with seats beneath the shade."

The double blossomed hawthorn is certainly one of the greatest ornaments of our pleasure grounds, whether it be kept as a shrub or trained as a tree. There was, or perhaps still remains, two large trees of this description on the lawn before Warwick-house, at Worthing, whose impenetrable shade defies the beams of Sol, when he darts his fiercest rays. No pleasure ground should be without the fine splendid new kinds, and every grass-plot ought to be ornamented and be perfumed by their lovely blossoms.

Some of the double varieties are of a fine crimson, rose, and lake colour; others are white at their first appearance, and change to a faint red as they decay. The double blossoms are less fragrant than the common variety, which reminds us, says a French writer, of those young females who fear not to change their simple apparel for a more gaudy dress, which adds nothing to their attractions.

The foliage of the hawthorn is of the most agreeable medium green, and so highly polished that the white flowers are reflected on their shining surfaces.

It has often caused our surprise that men who expend large sums of money in forming gardens of pleasure, and much time in selecting plants, should bestow no time or attention on botany, which would add so materially to the gratification which flowers give them; for without some slight knowledge of this science they cannot enjoy the works of nature, because they do not know where to look, or the utility at what they look at. The botanist looks into the flowers of the hawthorn, not only to observe the stigma and to count the chives that surround it, but observes the shape of the five petals, whose concave forms protect the pollen and mature it by acting as reflectors. He then sees them bend over their chives, and rest their heads of pollen on the stigma, which has some attractive power not yet defined. He is delighted with the regularity and order with which they discharge their prolific powder, and retire back to give place to other chives until the whole have performed their office without confusion. He knows then that the petals have discharged their part towards the formation of the future plants, and he sees them given to the wind without regret, because it is necessary for the young fruit to enjoy the juices of the plant, without being spent any longer upon the petals.

CULTURE OF THE ORANGE.

BY MR. THOMPSON, ELESTON GARDENS, SOMERSETSHIRE.

I BEG to send you the result of the culture of our orange trees at this place. My employer bought several that were newly imported from Portugal and Spain; he has taken great interest in their cultivation, and has been at more trouble with them than has been conducive to their health. They were in tubs eighteen inches diameter; he frequently stirred the soil on the surface of the tubs, (which broke the young fibres,) and gave them a great quantity of water at all seasons, until the soil became sodden and the trees sickly. They were then removed from the greenhouse to a vinery, where they lost all their leaves; this was in the winter of 1830-31. They were then turned over to my management, when I considered myself placed in a similar situation to a physician who is called in when the disease appears incurable. I let them stand in that deplorable condition all winter, and in the month of March I turned them out of the tubs, and put them in pots from eight to ten inches in diameter, (the trees were four feet high.) I used turf-soil where sheep were folded at night, which had been previously prepared some months before for pines, to this I put a third part of decayed leaves. I placed a handful of broken potsherds at the bottom of each pot to give a good drainage; water being allowed to stagnate, it soon destroys the health of the plant. Orange trees like a humid atmosphere. The trunk of those under my care were dry, and had what gardeners term a hide-bound appearance, which is the case with all imported from abroad that I ever saw; to remedy this, I tied damp moss round all the trunks from the surface of the pots up to the branches, and cut in the young wood to two or three eyes; I then set them in a vinery, in which the temperature was about sixty degrees. The moss round their stems I kept constantly damp by syringing it every morning; by these means, together with occasionally steaming the house, I had the great satisfaction of observing the trees prosper, and by the end of July they had made a quantity of fine young shoots; I then removed them to the greenhouse, where they matured their wood, where they still remain, in as good health as I could wish, and several of them finely in bloom at this time.

I do not admire the practice of purchasing imported orange trees, for after all trouble and expense, they often become sickly, disappoint the proprietor, and cast reflection on the judgment of the practical gardener. If strong, healthy orange trees are wished, the best plan I know of is to raise the stock from seeds, and graft or bud them when two or three years old; these will be found more hardy, and suitable to the climate of Great Britain.

WARDIAN CASES.

The chief element of success in growing plants in these, it is observed in the *Horticultural Magazine*, consists in making a suitable selection, and introducing them at the proper season; next to this, stand arrangement, and thorough cleanliness. The plants most suitable are such as various annuals, cacti, ferns, lycopodiums, and orchids, in general avoiding very free and rapid growing kinds. The best mode of arrangement is, to have in the centre a rustic branch reaching to the top of the case, and fixed at the bottom; to this branch (or tree in miniature) the orchids may be attached. The surface may, throughout, have an irregular rocky character, and here ferns and lycopodiums may be planted. The arrangement of the plants may often be changed, so as to give variety. Thunbergias are found to do admirably in these cases; sow a few now in a hot-bed for that purpose. Cacalias, mesembryanthemums, cacti, and similar plants do pretty well in small pots, amongst soil containing lime rubbish well drained. Lycopodiums and ferns, which are perhaps the best suited of any, may be increased by taking off young plants, and checking them by growing them in small pots with little soil; they then do not get large; the dwarf sorts are best; the rare and beautiful kinds should have the most conspicuous places. *Lygodium scandens* does well, and should be allowed to ramble amongst the orchids. Orchids should consist of the small growers; they must be attached to very small blocks, by small wire, with a little moss about their roots. The sensitive plant which does well, and has much interest, should now be sown in a hot-bed, preparatory to being placed in the case.

SOILS FOR FLOWER BEDS.

BY FLORISTA.

An addition of fresh loam to flowers in beds should be made every spring. This is much more necessary than manure. If the loam is not a rich one, in that case a portion of well rotted manure should be added thereto. I have found that fresh loam induces much greater profusion of flowers, of richer colours, and a less proportion of foliage. The reverse of these is, in nine out of every ten cases, the result, where much manure is added to the existing soil, if old. I usually add about four inches of fresh loam every year, adding it in March, and if it be necessary in order to prevent the bed being too high, I remove a due proportion to admit the requisite quantity of new.

RHODANTHE MANGLESII.

Having grown this lovely flowering, everlasting like, annual to a perfection beyond what I have seen elsewhere, I venture to send particulars of my mode of treatment for insertion in the Cabinet.

The compost I use is, equal portions of peat which is full of fibre from decayed vegetable matter, as moss, &c., and good rich loam, with as much silver sand as will keep the others tolerably open. I do not like the miserable peat from a barren common, the sort I procure is a rich one. I sow in pots, in September, raising the plants in a hot-bed frame, so as to have moist peat, a bell-glass is placed over the pot, and the pot placed in a saucer in which half an inch of water is constantly kept, this keeps the soil moist; these are transplanted singly into small pots, being careful to keep all the roots and soil adhering in potting. I keep the plants in the hot-bed frame, shading for a few days, and when vigorous enough I place them in a cool plant stove, on a shelf, near the glass. Early in February I repot into 24-sized pots, and they bloom beautifully by the first week in April. I sow for a succession to these about the end of February, and these plants bloom from the end of May to August or September. I raise, and afterwards treat the plants in all respects as before mentioned. I always have a liberal drainage, and my compost is only chopped, not sifted. I prefer to retain the plants in the greenhouse, where they do well at all times, not liable to the casualities of the open air. Pots of plants turned out entire at the end of May will succeed well, and are peculiarly interesting, but in doors is beautifully ornamental.

THE MOSS ROSE.

"The rose that hails the morning,
Arrayed in all its sweets,
Its mossy couch adorning,
The sun enamoured meets."

THIS elegant rose is generally supposed to be the offspring of the Provence rose, whilst others think it belongs to the family of centifolia or hundred-leaved rose. It appears to be quite unknown to the ancients, as they have left no description of a flower that resembles it, and it is too singularly beautiful to have escaped Pliny's notice had it been in existence. By Furber's catalogue it appears that it was cultivated here in 1724; but Miller first saw it in Dr. Boerhaave's garden in Leyden, in 1727. The learned doctor not only corresponded with many botanical persons in this country, but visited England, and became a member of the Royal Society of London. It is therefore most likely that on its first appearance in this country, a plant would be forwarded to Leyden, for the inspection of a person that all Europe was then regarding as the star of the age.

Although the moss rose appears to be a plant of so short an existence, its birth place is not satisfactorily known; but from all the accounts we can collect of its register, it appears to be a fortuitous child of England, as we have numerous accounts of its having been exported, but none of its importation into this island, nor has it been discovered elsewhere, except in a state of cultivation. Messrs. Lee and Kennedy, of Hammersmith, raised a perfectly single moss rose, which they pronounced to be only a variety of the common Provence rose. I therefore conclude that the moss-like pubescence of the calyx and young branches, is owing to some accidental circumstance which this climate produces, as we are told that this variety loses its mossiness almost immediately when planted in Italy, and I have not yet heard of this rose having been in any instance raised from seed, for the single moss rose was reduced to that state from the double variety (either accidentally or intentionally) by a peculiar mode of cultivation. Since that period numerous fine kinds have been raised, and render this very lovely and universally admired class of roses, almost indispensable to every collection. The following are now grown in this country, viz.—

A feuilles luisante, delicate pink, edges blush, full.
A feuilles pourpre, bright purplish-red, double.
Alice Leroi, lilac rose shaded, fine form, large and double.
Anemone or Sanguinea, even light crimson, double.
Angélique Quetier, P., rosy lilac, exquisite in bud, large and double.
Blush, P. F., blush, centre pinkish, beautiful, large and full.
Blush (Hooker), lilac blush, erect growth and full.
Brilliant (Lee), bright pink, semi-double.
Catherine de Wurtemberg, blush rose, full.
Celina, P., rich crimson, shaded with purple, superb, large and double.
Charlotte de Sor, bright rose, double.
Common, F., pale rose, beautiful, large and full.
Comtesse Murinais, fine white, large and double.

Condorcet, pale rose, double.
Crimson, or Damask, light rose, large and double.
Crimson French, rosy crimson, distinct and full.
Crimson Pompon, purplish red, abundant bloomer, small and double.
Crested, P., bright rose, beautiful, very large and full.
De Colmar.
Delphinie, bright rose, small.
D'Orleans, bright purplish-red, full.
De Metz, P., even glossy rose, exquisite, large and double.
Du Luxembourg (Ferrugineuse), crimson, shaded with purple, beautiful, double.
Eclatante, deep even pink, fine petal, large and double.
Emperor (Hooker), reddish-crimson, very pretty, full.
Foncée, dark rose, large and double.
Globuleuse, carmine, fine globular form.
Gracilis, F., deep pink, free bloomer, large and full.
Grandiflora, veined rose, very large and double.
Hélène Mauget, rich even rose, full.
Hortensia, red, fine, large and double.
Lancel, P., bright rosy purple, superb, full.
Lansezeur, deep rosy purple, veined, double.
Louise Colet, P., delicate glossy blush, shaded, large and double.
Malvina, rosy pink, blooming in clusters, large and full.
Marbrée, rose, marbled, semi-double.
Mauget, reddish-purple, double.
Miniature, light crimson, pretty, small and semi-double.
Mrs. Wood, red, shaded with purple, large and double.
Panachée pleine, white, striped with rose, pretty, double.
Partout, rose, leaves mossed, large and full.
Picciola (Scarlet Pompon), lively crimson, mottled, pretty, double.
Pompon (Moss de Meaux), blush, peach centre, very pretty.
Pompon Feu, light vivid crimson, distinct, full.
Pourpre de Laffay, rich crimson, shaded, beautiful colour in bud, double.
Presque Partout, rose, large and full.
Princesse Adélaide, P., pale glossy rose, blooming in corymbs, large and full.
Princess Royal, crimson-purple, marbled with red, large.
Prolifère, deep rose, beautiful, large and full.
Renoncule Pourpre.
Rose, pale, F., pale rose, fine form, large and full.
Rosinella, rosy purple, double.
Sage-leaved, rose, veins and edges of leaves red, double.
Splendens, light glossy rose, large and semi-double.
Striped, blush striped with rose, semi-double.
Varacel, dark purple spotted with rose, small and full.
Vieillard, P., pale rose, large drooping foliage, full.
Unique, F., pure white, large and full.
White Bath, P., paper white, beautiful, large and full.

The moss rose is made the emblem of voluptuous love, and the creative imagination of the poet thus pleasingly accounts for this rose having clad itself in a mossy garment:—

"The angel of the flowers, one day,
Beneath a rose-tree, sleeping lay,
That spirit—to whose charge is given,
To bathe young buds in dews from heaven.
Awaking from his light repose,
The angel whisper'd to the rose,—
'O fondest object of my care,
Still fairest found where all are fair,
For the sweet shade thou'st given to me,
Ask what thou wilt, 'tis granted thee.'
'Then,' said the rose, with deepened glow,
'On me another grace bestow.'
The spirit paused in silent thought,
What grace was there that flower had not?
'Twas but a moment—o'er the rose
A veil of moss the angel throws,
And, robed in nature's simplest weed,
Can there a flower that rose exceed?

M. Redoté, the author of a French pictured work on roses, seems displeased at our claiming the moss rose as originating in England; he says, "nous ferons observer qu'il n'est pas rare de voir les iconographes Anglais considérer beaucoup de plantes comme indigènes au sol de leur pays, toutes les fois que le lieu dans lequel elles végetent naturellement leur est inconnu, circonstance qui doit faire rejeter toutes les assertions de ce genre."

Madame de Genlis tells us, that during her first visit to England, she saw moss roses for the first time, and that she took to Paris a moss rose-tree, which was the first that had been in that city; and she says, in 1810, "the cultivation of this superb flower is not yet known in France."

Madame de Latour endeavours to do away with this statement. In a high strain of compliment, she says, "when Madame de Genlis returned from London to Paris, she was become very celebrated, and the crowds of people who went to her house under the pretence of seeing the moss rose, were attracted thither by that lady's celebrity; and the modesty of Madame de Genlis alone could have led her into this error; for this rose-tree," she adds, "which is originally from Provence, has been known to us for several ages."

Mr. Rossig, who has lately published a work on roses, and with good coloured figures, says, that the moss rose is found on the Alps. But this information comes rather late, as it is improbable that a plant of such a size and singular beauty should have escaped the penetrating eyes of the various botanists who have herbalized so frequently on these mountains, as not to have left a species of grass or even moss unrecorded.

The moss rose is propagated by layers or suckers, which it sends up plentifully when growing in rich light loam, that is rather moist than over dry. It likes to have a free supply of well rotted cow-dung, which is cooler than stable-dung. When the branches are laid down they should be slightly slit, as carnations are, which will cause them to take root, or be increased by budding or grafting very readily. This beautiful rose is also increased by budding upon stocks of the other sorts, which is generally performed in the month of May; but these plants are not so durable as those raised by layers.

THE ANNUAL SUN-FLOWER.

The sun-flower is not equalled in its noble and magnificent display of flowers, and may justly be styled the king of the flower-garden. I have often grown it with flowers above a foot across, and the dark centre, margined round with the rich yellow petals, render it most strikingly beautiful. It has been a great favourite with me for many years, and I am induced to recommend its more general culture.

The poet Churchill speaks of it as

> —— "the proud giant of the garden race,
> Who. madly rushing to the sun's embrace,
> O'ertops her fellows with aspiring aim,
> Demands his wedded love, and bears his name."

It is not called sun-flower, as some have supposed, from turning to the sun, but from the resemblance of the full-blown flower to the sun itself; Gerarde remarks, that he has seen four of these flowers on the same stem, pointing to the four cardinal points. This flower is a native of Mexico and Peru, and looks as if it grew from their own gold. It flowers from June to October.

The dwarf annual kind, which grows from eighteen inches to three feet in height, is a little more within compass.

The perennial sun-flower is much esteemed for bouquets; the flowers are about eight or ten inches in diameter; there is a constant succession from July to November. It is a native of Virginia.

The dark-red sun-flower, and the narrow leaved, are of a more moderate height; the first, two or three feet, the latter, a foot and a half. Both are natives of Virginia, flowering in September and October.

The sun-flowers are hardy plants; the perennial kinds are increased by parting the roots into small heads; this should be done in the middle of October, soon after the flowers are past, or very early in the spring, that they may be well rooted before the droughts come on. They will require watering in dry weather, particularly when in pots.

Several of the sun-flowers are natives of Canada, where they are much admired for their beauty, and cultivated, in gardens, by the inhabitants; in the United States they sow whole acres of land with them, for the purpose of preparing oil from their seeds, of which they produce an immense number. This oil is very pure, fit for salads, and for all the purposes of Florence oil.*

Thomson supports the popular notion that this flower turns ever towards the sun:—

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* See Lambert's Travels in Canada, &c.

"Who can unpitying see the flowery race,
Shed by the morn, their new-flushed bloom resign
Before the parching beam? So fade the fair,
When fevers revel through their azure veins.
But one, the lofty follower of the sun,
Sad when he sets, shuts up her yellow leaves,
Drooping all night, and, when he warm returns,
Points her enamoured bosom to his ray."

Mr. T. Moore has taken advantage of the same idea, in the words of one of his Irish melodies:—

"As the sun-flower turns to her god when he sets
The same look which she turned when he rose."

"The flower enamoured of the sun,
At his departure hangs her head and weeps,
And shrouds her sweetness up, and keeps
Sad vigils, like a melancholy nun;
Till his reviving ray appears,
Waking her beauty as it dries her tears."

Clare gives a natural picture of the sun-flower in the following description of the floral ornaments of a rustic cottage:—

"Where rustic taste at leisure trimly weaves
The rose and straggling woodbine to the eaves,—
And on the crowded spot that pales enclose,
The white and scarlet daisy rears in rows,—
Training the trailing peas in bunches neat,
Perfuming evening with a luscious sweet,—
And sun-flowers planting for their gilded show,
That scale the window's lattice ere they blow,
Then, sweet to habitants within the sheds,
Peep through the diamond panes their golden heads."
Village Minstrel, &c., vol. ii. page 80.

The size and splendour of this flower make it very conspicuous, and some have accused it of being gaudy, although constant in the one golden colour of its attire; gaudiness, however, is a quality which may be pardoned in a flower,

"Where tulip, lily, or the purple bell
Of Persian wind-flower; or farther seen
The gaudy orient sun-flower from the crowd
Uplifts its golden circle."
Maturin's Universe, page 55.

The sun-flower was formerly called marygold also, as the marygold was termed sun-flower. Gerarde styles it the sun marygold.

There is another genus producing the same kind of flowers, only smaller, usually called the willow-leaved sun-flower. Their botanical name is Helenium, supposing them to have sprung from the tears of Helen, the wife of Menelaus; it has not been clearly ascertained upon what occasion. Drummond speaks of this flower in his lines on the death of Prince Henry:—

"Queen of the fields, whose blush makes blush the morn,
Sweet rose, a prince's death in purple mourn;
O hyacinth, for ay your Ai keep still,
Nay with more marks of woe your leaves now fill:
And you, O flower! of Helen's tears that's born,
Into those liquid pearls again now turn."

Pliny says, that the Helenium was found in the isle of Helena, and was formed by her tears; Dioscorides tells the same story. There was an island of that name on the coast of Attica, to which Helen retired after the siege of Troy; it was a native not only of that island, however, but also grew in the neighbourhood of Alexandria, upon which Tournefort observes that Helen's tears seemed to cost her very little.

OBSERVATIONS ON THE STUDY OF BOTANY.

BY CLERICUS.

THE study of botany has at all seasons charms that yield a vast amount of delight, but more especially so during the periods of spring and summer, when such an immensity of floral objects display their peculiarities of parts, and exhibit their beauties; and the study is as rational as it is innocent and useful. To encourage the youthful readers of this magazine especially to this most interesting pursuit, and at once to avail themselves of the advantages the spring and summer seasons afford, induces me to compile an abridged history of the science, which will show that it has long been an ardent pursuit, both in this and other countries.

Botany previous to the reign of Elizabeth was almost unknown as a science, and horticulture was looked upon in no other light than as a mechanical art; but upon her accession brighter days began to dawn upon it, and it was soon seen that botany formed the principal part of the only foundation upon which an enlightened practice of horticulture could rest. The first establishment formed upon any regular plan for the scientific cultivation of plants, was made in this reign by Gerarde, who formed his physic garden (1567), although the first royal professor of botany may be said to have been appointed by Richard II. (1377-1399), who allowed John Bray an annual pension for his knowledge and skill in botany and physic. John Gerarde lived in Holborn, and here it appears was his physic garden situated. He attained considerable eminence as a surgeon, and had travelled when young up the Baltic; he had a large collection of plants, exotic and indigenous, amounting to above 1100 sorts—his catalogue describes 1033 species; he was patronized by the great lord Burleigh, who was also a great admirer of plants, and who had a better collection than any other nobleman in the kingdom. A desire for the study and knowledge of plants, and their cultivation, seemed to pervade Europe simultaneously at this period; on the continent it had become popular, which our ancestors speedily followed, so that "many tributary streams began to flow into this branch of the river of science." Padua took the lead, where, whilst it was under the Venetians, a public botanic garden was established in 1533. Lucas Ghinus, the first public professor of botany in Europe, strongly advocated such institutions, and through him a similar garden was established at Bologna, where Dr. Turner first imbibed the knowledge of plants which afterwards rendered him so celebrated. On the continent several private gardens of the same kind were formed. We find Enricus Cordus, at Bremen, had one about 1530, and Mordecius at Cassel. Gesner constructed the first botanic garden in Switzerland at Zurich, 1560; that of Paris was established 1570; Leyden, 1577; Leipsic, 1580; Montpelier, 1598; Jena, 1628; Oxford, 1632. Henry Danvers, Earl of Danby, gave five acres of ground on the banks of the Charvel for the establishment of this last, where he built green-houses and stoves, enclosed it with walls fourteen feet high, and munificently endowed the establishment; one was endowed at Edinburgh in 1680 by Sir Jacob and Sir Andrew Balfour; that at Chelsea was founded in 1673 by the Apothecaries' Company; this establishment was exceedingly expensive, and the company have deservedly stood high in public estimation for their zeal to promote the objects of science in this, as in many other instances; being undertaken when the society was without funds, they were obliged to have recourse to the private resources of its members for the purpose, and no pecuniary advantage appeared likely to be derived from the outlay. At this period botany, as a systematic science, could be scarcely said to exist; systematic arrangement, beyond that of alphabetical order, was barely thought of. Generic and specific characters were scarcely regarded. All herbalists were florists, and in both capacities the chief object was to discover and introduce new plants, for they could not then distinguish between species and variety. All the celebrated men in these days were raisers of "florists' flowers," they sought to increase their knowledge of individuals, and left a detached mass, which Ray, Tournefort, Linnæus, &c., afterwards simplified and arranged.

The advantages derived, therefore, by the establishment of botanic gardens was of the first importance. No plant, unless its native climate, soil, and habits, are attended to, can be cultivated with success. Here, therefore, where plants could be associated in cultivation, the scientific man could pursue his favourite study under circumstances not to be otherwise attained; ascertaining their relative characteristics, comparing doubtful species, witnessing their state at different periods, the soils and atmosphere that best suited them, &c.

This improvement in knowledge was not confined to botany alone, the whole circle of the arts and sciences partook of it; by emancipating the human mind from servile thraldom, the reformation taught man, instead of blindly bowing to that which custom and antiquity had consecrated, to have a self-dependence, to search all things, and retain only that which was good; it gave an impetus to improvment, and stirred up a spirit of inquiry which no tyranny could check, and like a stream which had been pent up within narrow bounds, when once the floodgates were open it rolled rapidly onwards to the ocean of knowledge. Then arose such men as Bacon, Peiresc, and Evelyn; and while the path which men of science should tread was traced by the first, the last lent their talents and wealth to assist them whilst engaged in the pursuit. Bacon taught that experiment and observation alone was the foundation of true knowledge; that facts and not fanciful or metaphysical theories were the materials with which he could hope to raise any solid superstructure, that man, as the servant and interpreter of nature, could discover truth only as he observed or imitated her operations. Peiresc was a man of letters, whose purse and advice were open to all the scientific men of the day; possessing a good library, and a garden of choice plants, he delighted to spread them over all Europe, a liberality of feeling which did honour to the individual, and which we could wish to see carried out into operation more extensively even at the present day. Evelyn trod closely in the same steps. He purchased a beautiful spot at Saye's Court, in Kent, and was one of the first fellows, and of the council, of the Royal Society, on its first formation in 1662. This age has been truly called the "golden," if we consider the list of bright names which in all departments of science and literature adorned it, and especially in botany and chemistry; horticulture and floriculture began rapidly to rise from the empiricism in which it had been involved. A spirit of research became prevalent, foreign voyages, for profit as well as fame, were undertaken by Raleigh and Cavendish; and Raymond and Lancaster, and Spanish America and the East Indies began to contribute the gems of their vegetable productions to the collections of Europe; rare plants of every description were sought after, and some, such as the potato, tobacco, and tea, became, from mere novelties, to be regarded either as the necessaries or the luxuries of life.

Much additional information had been obtained, and new varieties of flowers introduced during the reign of Elizabeth, who was herself passionately fond of flowers; from the settlement of the Flemish worsted manufacturers at Norwich in 1567, during the persecutions in their country under Philip II. and the Duke of Alva—they brought with them gilliflowers, Provence roses, and carnations; tulips, and the damask and musk roses, would appear from Gerarde to have been known for some years, as he says, in 1596, a collector of tulips had been so for twenty years, and had an immense variety. The Flemings, it would also appear, established "shows," as there is mention of a "florists' feast" at Norwich so early as 1637, when a play termed "Rhodon and Iris" was performed.

The fondness for flowers began now to spread itself far and wide—it pervaded every rank, and the nobility of every county, and the artisans of every manufacturing town in the kingdom are mentioned as delighting in their cultivation.

In Holland, where this passion began, it was carried to the greatest excess, and degenerated at last into a series of gambling transactions, which continued until the middle of the last century, when 200*l.* were given for a hyacinth root, and the *Semper Augustus* tulip fetched 400*l.* The most distinguished patron of gardening in this reign was the Lord Keeper, Sir Nicholas Bacon, whose chief care and attention was bestowed on the gardens attached to his beautiful mansion at Gormanbury.

The company of gardeners was formed in the third year of James I. who made them a corporate body, with a master, warden, and assistants, and it was composed of the gardeners of London, and six miles around it. The preamble to their charter states, it was granted on account of the disappointment caused by defective samples of seeds, &c., being supplied to the public. They possessed very extensive powers and privileges; no one being permitted to practice as a gardener unless first approved by the company. Such days as these, when corporations monopolized to themselves the advantages which all parties in a community whose industry entitles them to it ought to share, are fast passing away; legal enactments or restrictions in conducting private business are mostly injurious—never beneficial; they are hostile too, and generally retard improvement, and are in most cases worse than useless. We cannot, however, but perceive how extensively gardening was at this time pursued, when disappointments in its products was considered worthy of such protection. This charter was confirmed in the fourteenth year of the same reign. The second royal botanist of whom we find any mention, was appointed by this monarch, in the person of Matthias de Lobel, who was under the patronage of Lord Zouch; his garden, the expense of which was borne by his lordship, was at Hackney.

King Charles I. was very fond of it, he conferred the title of royal herbalist on Parkinson. Orangeries were much attended to by the nobility; the Queen, it is said, had one at Wimbledon, where there were forty-two trees, each valued at 10*l*. The gardens and greenhouses at Fulham Palace were greatly extended by Bishop Compton; this prelate appears to have been an indefatigable collector, possessing withal a correct and scientific taste, and he was said to possess a greater variety of plants than could be found in any other part of England. In the time of William III. and Mary his queen (1689-1702), the Dutch style was introduced into England. Dr. Tillotson, in her funeral sermon, mentions her fondness for the pursuit. She delighted in exotics, and allowed Dr. Plunkenet 200*l*. per annum for his assistance in collecting, &c.

PLANTS IN DWELLING ROOMS.

BY SOPHIA CLARKE.

To treat on the proper management of plants in houses is a subject attended with considerable difficulty, every genus requiring some variation both in soil, water, and general treatment. If the room where the plants are intended to be placed is dark and close, but few will thrive in it; if, on the contrary, it is light and airy, with the windows in a suitable aspect to receive the sun, plants will do nearly as well as in a greenhouse; but if they are observed to suffer, the effects may generally be traced to one of the four following causes: want of proper light and air, injudicious watering, filthiness collected on the leaves, or being potted in unsuitable soil.

Plants should always be placed as near the light as they can conveniently stand, and receive as much air as can be admitted when the weather will allow; indeed those persons who have no other conveniency than the house to keep them in will find that they derive immense advantage from being, during fine weather in spring and autumn, turned out of doors in the evening and taken in again in the morning, the night dews contributing greatly to their health and vigour.

Injudicious watering does more injury to plants in rooms than many persons imagine. To prevent the soil ever having a dry appearance is an object of importance in the estimation of many, they therefore water to such an excess that the mould becomes sodden, and the roots consequently perish. Others, to avoid this evil, run into the opposite extreme, and scarcely give sufficient to sustain the life of the plant.

This is, however, by no means so common a practice as that of giving too much, for in general, if anything appears to be the matter with the plants, large doses of water are immediately resorted to, and if recovery is not speedy it is again administered, with but little doubt of its infallible restorative powers; but such persons, like an unskilful physician who gluts the weakly stomach of his patient, only hasten what they are trying to prevent. This overplus of water will show its bad effects by a very dark colour, and if the plant receives too little the leaves will turn yellow, and eventually die. Never allow water to stand in the saucer, but pour out any that drains from the pot, no plant but the Aquatics will be healthy having stagnant water in the saucer, it sours the soil at the bottom, and rots the roots.

The best plan is, to always allow the soil in the pot to have the appearance of dryness (but never sufficient to make the plant flag) before a supply of water is given, which should then be pretty copious, but, I repeat, always empty it out of the pan or feeder in which the pot stands as soon as the soil is properly drained. The water used for the purpose ought always to be made about the same temperature as the room in which the plants grow; never use it fresh from the pump, but either let it stand to warm all night, or take off the chill by adding a little warm water to it, or the growth of the plants will be much checked.

Filthiness collected on the leaves may either arise from insects or dust, the former may be speedily remedied by placing the plants under a hand-glass, or anything that is convenient, and burning some tobacco till they are well enveloped in the smoke; and the latter may be removed by occasionally washing them on the head with pure water, either by means of a syringe, the rose of a watering pan, or with a sponge if the dirt still adheres.

By being potted in unsuitable soil is by far the most difficult part of the business to rectify, for no certain line can be drawn unless each genus was treated on separately; however, as this cannot be done in a paper like the present, a few general remarks which perhaps, with some little exceptions, may be found to be pretty correct, will suffice; one thing, however, is essential, never have the soil sifted, but in a rough chopped state, and two inches deep of drainage.

All plants whose branches are fragile or slender, and roots of fine thready, fibrous texture, with general habits like the Ericæ, as Diosma, Andersonia, and Epacris, will require the same soil (peat earth) and very similar treatment to Cape Heaths.

Those whose wood and general habits partially differ, and whose roots are of a stronger texture, as Acacia, Ardisia, Stenocarpus, Tetrathica, Tristanea, &c., will require a portion of sandy loam, in many cases about equal parts; and where the habits differ materially from the Heath only a small portion of peat earth will be required, and a compost may be made a little rich by the addition of well-rotted dung, or a similar soil to that prescribed for Pelargoniums.

Almost all Cape and other bulbs, as Sparaxis, Ixia, Gladiolus, Tritonia, &c., thrive best in a rich sandy loam, without a mixture of peat.

Shrubby and herbaceous plants, with luxuriant roots and branches, as several species of Myrtus, Jasminum, Hibiscus, Hermannia, Heliotropium, &c., require rich loam, lightened with leaf soil, without any portion of peat.

Plants with powerful roots, and but slender heads, as Veronica, Senecio, Scutelaria, Ruellia, Mauradia, &c., require a light sandy soil, mixed with a small portion of leaf mould and very rotten dung. At the time of potting always lay plenty of potsherds at the bottom of each pot to give a good drainage.

It will be seen that those directions do not allude to either Orchideous, Succulent, or Aquatic plants.

Many of the Orchidaceæ are parasitical, and require a portion of decayed wood mixing with the soil; others grow in damp moss, these being chiefly stove plants they will not flourish in a room. There are several genera that do very well both in the greenhouse and in rooms, as Arethusia, Calopogon, Dendrobium, Ophrys, &c., the soil suitable for these is a mixture of about equal parts of light sandy loam and peat; very little or no water must be given when they are not in a growing state.

Succulent plants of all descriptions require very little water, and are in general very easily managed in rooms; many of them thrive in a mixture of sandy soil and lime rubbish, as Aloe, Cacalia, Cactus, Aizoon, &c., others grow well in a mixture of peat and loam, as Coris, Cotyledon, Mesembryanthemum, &c.

Aquatic plants, as Villarsia, Actinocarpus, &c., generally do well in a mixture of peat and loam, and require to be kept constantly in a wet state; indeed the best way is to place the pot in a deep pan or feeder, which should always be kept full of water.

Bulbs of most sorts flourish in rooms with less care than most other kinds of plants.

If the above precautions be attended to, plants may be brought nearly, if not altogether, to as much perfection as in a greenhouse. I am an ardent admirer of flowers, and by an extensive pursuit of the culture of plants in rooms for ten years, I have had as healthy and fine-bloomed specimens as I ever saw in plant structures. I ought to observe, the windows are large, and what are termed bow windows, and full south.

CULTIVATING PANSIES IN POTS.

BY VIOLA.

In March, 1846, I potted a quantity of Pansies, in pots 12 to the cast, in a good sandy loam, with one-third of old rotten cow-dung. I had a free drainage, and the soil unsifted. The plants bloomed admirably, and as I kept them in a three-light frame I could admit what air I required, readily shade from sun, excess of wet, &c. I did not lose one plant, nor were they in the least affected by mildew. Having them in pots allows me to examine the plants, to earth up and strike shoots by layering, &c. I find it is an entire preservative through winter to have young plants potted singly, in small pots, at the end of September, and be kept from frost in a dry pit or frame. I did not lose a plant, out of about 300, during the past winter.

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

AGAIN the cheerful month of May is ushered in, and the gardens, hedges, and fields, begin to teem with all the verdancy and glowing tints of their floral treasures. The occasional return of frost, which have recently intercepted and obstructed the stream of vegetable activity, have their severity more tempered, yet all danger is not positively passed over, and the floral cultivator must for a fortnight longer exercise caution. This month is the usual period for planting out in masses, as well as promiscuously, those greenhouse and frame plants, as Geraniums, Heliotropes, Petunias, Verbenas, &c., which in consequence of their previous habitations will be somewhat tender, and the new shoots being delicate will be the more liable to receive injury by a slight frost, and such occurrences we have often known to take place even beyond the middle of May.

It is, however, very desirable to plant out, as early as possible, in order to ensure an early show of bloom, and have the beds, &c., covered entire. Where this system of adorning the flower garden is carried out to a great extent, and we observe it to be increasing every successive year, it is rendered proportionably difficult to give entire protection, so as to guard against casual frost and cold at night, but as far as is practicable, a covering of canvass, cotton, mats, or similar article, should be used; such may be elevated above the tops of the plants, by sticks stuck into the beds somewhat close, or by having rods bent over the beds, &c., upon which the covering may be thrown and secured down at the sides. Thus provided, the plants may safely be turned out into the open ground early in May, they will then be obtaining roothold in the soil, and speedily cover the beds. An early removal of such plants into the open beds is sometimes very desirable, where the pits, frames, &c., are required for other purposes. Where there is ample pit, or frame room, then a delay is not a matter of importance on that account, and a continued growth of the plants in their warmer habitations will produce larger specimens when turned out later, but to turn out earlier and have the protection above stated secures a finer display, and the addition of extra potting, watering, &c., requisite while under pit or frame cover, will be obviated.

If any of the preparatory arrangements for planting out are yet incomplete, no further putting off should be indulged in.

Fresh loam, peat, and well rotted manure are essentials in due proportion, and if not already provided should be done without delay, we have always found fresh soil induced a finer bloom. With plants that are of a gross habit, less manure of course is requisite; exotic plants turned out, should never be gorged with fresh dung, it generally injures them. The less vigorous, and profuse blooming kinds, may have more manure in proportion. If pots of cuttings, &c., late put in, are yet remaining unpotted, they should immediately be potted, if it be only for the space of a fortnight; they would then be pushing forth new roots, and by retaining the balls of earth entire, they much earlier form fine specimens in the beds than planting out at once out of the cutting-pot, as it is usually termed.

We are pleased to observe a more systematic and judicious arrangement of the plants as to heights, colours of flowers placed in contrast, &c., is attended to, so as to obtain, as much as possible, one harmonious whole, and that to be as striking in show as the flowers will accomplish.

Where hardy Annuals have come up too numerous, they should be thinned out, so as to retain but enough to be vigorous. Those kinds of tender Annuals, as Asters, Marigolds, Stocks, &c., raised in pots or frames, should be taken with as much soil to the roots as possible, and, by the middle of the month, be carefully planted out, secured, &c., as requisite. Dahlias must be planted out as early as convenient, covering them overhead by a garden-pot, till fear of danger from frost is over. A portion of fresh loam and well-rotted dung is highly beneficial to their success. *Hyacinths*, *Ranunculuses*, *Anemones*, and *Pinks* in beds, will require due attention to watering, protection, shading, &c. The season hitherto being dry, should it continue, Ranunculus-beds must have a good supply of soft water given in order to ensure success. Water given twice a week to sink to the bottom of the roots is better than a little given every day, which only moistens the surface. Read articles on the general culture of these plants in previous numbers of our Magazine.

IN THE FORCING FRAME.

Attention to striking cuttings of stove and greenhouse plants, and in potting off such as are struck, is necessary now. Exotic seeds may be sown, Seedlings potted off, &c.

IN THE COLD FRAME, GREENHOUSE, &c.

Plants in these structures which are designed for turning out in beds, must have abundance of air to get them inured to the open border circumstances. Although abundance of air has been admitted, yet the plants will certainly have pushed shoots, and of course be, especially with delicate kinds, tender, and, in proportion, susceptible of injury by removal into the open air. It is best to keep the plants in, and give all possible air requisite, till after the expiration of the third week in May, rather than hazard them by a week or two earlier removal, in combating the vicissitudes of our varying climate, even at this period. A deep floor of coal ashes should be formed on which to place the pots, so as to preserve the roots from worms. After the pots are placed even at the surface, so as to hold water regularly, moss placed lightly between the pots, as high as to the rims, keeps the soil in a more even condition, and the roots at the sides of the pots are not scorched by powerful drying temperature. What are termed Greenhouse Annuals, as Balsams, Globe Amaranthus, Salpiglossis, Brachycomas, Rhodanthes, Browallias, &c., will replace the stock removed; attention to their preparatory growth is requisite, so as to have fine substitutes.

If Camellias have set their flower-buds fine, they should be removed out into the open air where the other plants are, or be placed where they can have a free admission of air by day, in a cool part of the greenhouse, or what is better, a pit frame. Re-pot any plant which requires it, and never defer to, what is often done, a general shifting, to the great injury of the specimens. Syringing over head will now be beneficial. As soon as green fly makes its appearance, destroy them by smoking the house or individual plant.

IN THE STOVE.

Achimenes should now have special attention, to produce fine specimens. Gesneras, Amaryllis, and specimens of Clerodendron, Ixoras, &c., for showing, must also have constant attention, as we have before directed.

BRIEF NOTES AND CORRESPONDENCE.

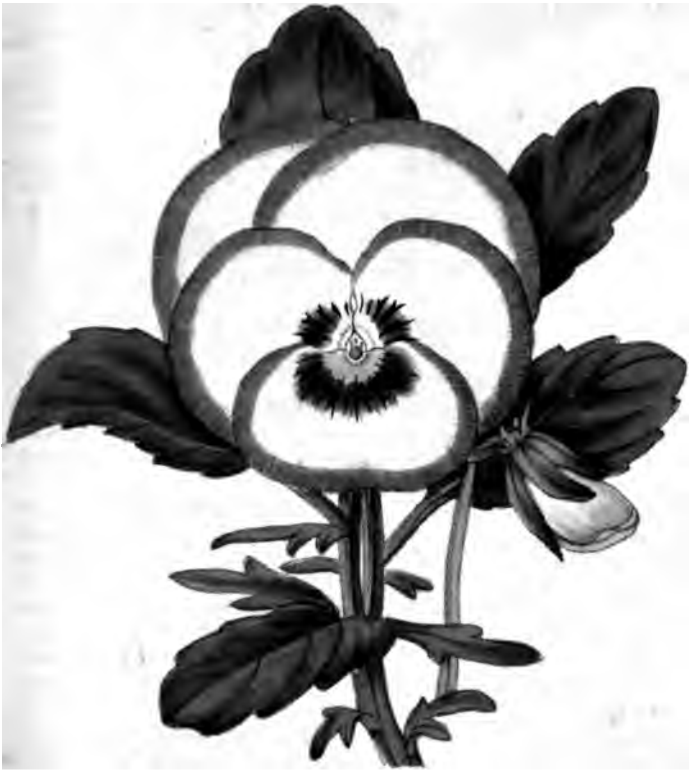
Metropolitan Floral Meetings.—The first of these for the present season, was that of the Royal South London Society, held in the Horns Tavern, Kennington, on April 21st.

The exhibition of *Auriculas* was limited, as might have been expected from the late backward season. Some fair specimens were, however, produced, and amongst private growers the 1st prize was awarded to W. J. Ginger, Esq., for Hogg's Waterloo, and Hedge's Britannia; 2nd, to W. Sandilands, Esq., for Stretch's Alexander, and Dickson's Duke of Wellington; 3rd, to J. Chapman, Esq., for Stretch's Alexander and Page's Champion. In collections of six varieties the 1st prize was awarded to Mr. Sandilands, who showed Dickson's Duke of Wellington, Stretch's Alexander, Taylor's Glory, Duchess of Oldenburgh, Dickson's Apollo, and Hogg's Waterloo; 2nd, to J. C. Chapman, Esq., for Dickson's Apollo, Chapman's Hope, Netherward's Apollo, Gabel's Duke of Wellington, and Taylor's Glory.

The display of *Heartsease* was excellent; the 1st prize in the Amateur's Class was awarded to J. Edwards Esq., for Caractacus, Curion, Rainbow, Mary Jane, Optimus, Lady Sale, Conquering Hero, Hunt's Duke of Wellington, Isabella, Pizarro, Duke of York, Purple Perfection, Tom Pinch, Field Marshal, Arethusa, Madonna, Rebecca, and Providence; 2nd, Mr. Parsons, for Excellent, Perseus, Hunt's Duke of Wellington, Dido, King of Prussia, Conquering Hero, Optimus, Vulcan, Duke of Wellington, Juno, Standard, Fair Maid, Purple Perfection, Duchess of Rutland, Shakespeare, Tom Pinch; 3rd, Mr. Over. The 1st prize in the Nurserymen's Class was awarded to Mr. Turner, of Chalvey, whose stand contained the following sorts: Optimus, Titian, Reliance, Hooper's Rebecca, Lady Sale, Duke of Wellington, Mary Jane, Jehu, King of Prussia, Virgil, Pizarro, Providence, Duchess of Rutland, Purple Perfection, Chater's Model of Perfection, Hall's Rainbow, Belissima, and Mahomet; 2nd, to Mr. Thompson, of Iver, whose stand contained Warwick, Optimus, Rainbow, Model of Perfection, Constellation, Pompey, Mrs. Montgomery, Duchess of Rutland, Virgil, Grand Duke, Hunt's Wellington, Bishop of Oxford, Shakespeare, Patriot, Daughter of St. Mark, Belvidere, and Hooper's Duke of Wellington.

For *Seedling Heartsease* a certificate was awarded Mr. Thompson, for a large and fine shaped flower named Perfection.

Some well grown collections of *Cinerarias* were produced, and the miscellaneous collections of *stove and greenhouse plants* were numerous, and fine. We regret, however, that we cannot find room for a list of the awards.



Blue Fringe

FLORICULTURAL CABINET

JUNE, 1847.

ILLUSTRATIONS.

THE Viola tricolor, Heartsease, or Pansy, from the French *pensée*, "thought," is a native of Britain, and in some localities grows in profusion in the cultivated fields; we have seen in some cases eight or ten acres together, one apparent mass of lovely, fragrant flowers.

It is only within a few years that special attention has been given to an improvement in the flower, by introducing it into the gardens, and attempting to raise hybrid kinds with the object of having not only more distinctive colours in the same flower, but particularly a perfection in form. To realize this, a very general effort has been made, and very rapid advances to an universal approved form has been effected, so that if we compare the Pansy in its wild state with one of our recent productions, the contrast is truly astonishing both in the varied colours and altered form.

An immense number of persons have been raising hybrid kinds, some of which have succeeded in effecting much improvement in the flower, and the stands of blossoms which now grace our floral exhibitions give testimony thereof, and the Pansy is now termed "a florist's flower," and ranks with the meritorious tribes deemed deserving competition at almost every general show.

One of these successful individuals is Mr. Major, landscape gardener, &c., at Knostrop, near Leeds; he has obtained several superior ones, which have been sold out into the country during the last few years. The beautiful one which we now figure, named Blue Fringe, was raised by him, and we are informed that it is not like one or two other kinds which have been grown for the past four years, which, although they are margined flowers, yet the edging is far from being constant, only occasional; but the Blue Fringe is constant in its very striking border that forms its belting. The variety well merits a place in every collection, and to be seen in every stand of Pansies exhibited.

In previous volumes of our Magazine we have inserted valuable articles on the particular treatment in cultivating this highly interesting plant, and to which we respectfully refer our readers. So much having been wrote upon it, and which contains every improvement up to last year, we abstain from a general detail, and only need add, in this place, a few particulars.

The general method of growing the Heartsease has been in the open bed, but on a recent occasion we visited a celebrated grower and successful exhibitor, and saw the culture of them carried out to a considerable extent; in fact with all the kinds grown to obtain blooms for exhibiting at the shows, in pots, and from our own more recent practice, we are assured that to grow them in pots is very much better than the open bed.

We need scarcely add, when there are a surplus of plants of course they will adorn wherever planted.

In growing them in pots they require a liberal drainage, a soil similar to what they delight in in the open bed, and to be propagated in the same manner, by cuttings, and new kinds obtained by seed.

By having them in pots they can be secured from loss during winter, by having them placed in a cold pit, frame, or similar place of protection. The plants in the open border, too, from the situation, or peculiarity of the season, is often affected by mildew, but when grown in pots they can be placed in a situation favourable to their health in all seasons.

Plants raised the previous year from cuttings always bloom the most vigorous. The pots will vary as to size as the plants increase in extent, and a re-potting is found necessary; the 24's are best for spring potting.

Modes of Propagation.

By Seed.—In order to have fine proportioned flowers save no seed but from such kinds, and draft out of the collection every one that is not of fine form, so that no impregnation may be effected by inferior sorts. The best time to sow the seed is early in April, or late in August. The soil must constantly be kept moist till the seedlings appear, which in the open bed will be about two months, and a week earlier when sown in pots. When in the open border a situation shaded from hot sun must be chosen, or a temporary shade be employed. Sow thinly, and transplant when they have made four rough leaves. A light loam is suitable to sow in, and cover the seed about one-eighth of an inch.

By Cuttings.—These may be struck at any time from spring to autumn, but they strike the best at the latter season. Side shoots not flowered are the best, short jointed too, and not more than about three inches long. Put them out in a shady border, being careful the bottom of the cutting rests upon the soil, and not left hollow; also let the soil be closed round the stem, not pressed so as to bruise it, but enough to prevent injury from an opening being left down to the bottom part of the cutting. Water liberally at the time of putting off, and continue, if the season be dry, as circumstances dictate; for a few days after being put off a slight sprinkling over head will prevent the foliage from shrivelling. Let it be recollected that one neglect of watering generally destroys the cuttings. In forming the cuttings, trim off the leaves to within about an inch of the top, then cut across close under a joint, with a clean cut. Insert them so deep as only an inch remains above the soil. As soon as they begin to push pinch off the leads; it induces them to root better, and the plants are more bushy. OFFSETS are not so good for successful culture as plants raised from cuttings.

SOIL.—A maiden loam, which has been turned up with the turf in it, so as to be broken down by the weather; if not sandy, a portion should be added. Take one half of such loam, one quarter well-rotted cow-dung, and the remaining quarter rotten leaf mould. If for a border an annual addition must be given, or which is best, a new bed be made. The same compost for pot culture under all circumstances. Never have the compost sifted, but only broken by the spade.

SITUATION AND PLANTING.—The bed should be where it can be allowed the morning sun till ten o'clock, and the afternoon from three or four, so that shade from hot midday sun is essential. Never have the plants under the drip from trees. For early spring blooming plant in more open, warm situation, in September. In spring planting a more shaded place must be selected. A third plantation should be made early in July. When plants are attacked by mildew, a good dusting over as well as under side of the leaves with common sulphur is a remedy.

The varieties now offered to the public as show flowers are numerous, which comprise what will usually meet the taste of some persons in colours, and of others where perfection in form, &c., is essential. It is not always that the best kinds are the successful ones at exhibitions, the more vigorous growth, or mode of exhibiting, having influence with some judges to a decision in favour of the latter. The following kinds comprised the stands of flowers exhibited at the show held on the 13th of May, viz.:—

FIRST PRIZE, 24 kinds.—Bohemian Girl, Nonsuch, Brown's Arethusa, Pizarro, Hall's Rainbow, Duchess of Rutland, Turner's Othello, White Serjeant, Dr. Wolf, Turner's Optimus, Lord Hardinge, Gossett, Potentate, One in the Ring, Hooper's Mary Jane, Climax, Hooper's Wonderful, Model of Perfection, Turner's Achilles, Great Britain, Hooper's Lady Sale, Attraction, Duke of Wellington, King's Exquisite, and Shakespeare.

SECOND, 24.—Optimus, Baroness Wenman, Pizarro, Cook's Star, Persies, Duchess of Rutland, Purple Perfection, Discount, Desirable, Regulator, Curion, White Serjeant, Dr. Wolf, Exquisite, Magrath, Orion, Model of Perfection, Jehu, Premier, Arethusa, Wellington, Madonna, Excellent, and Success.

NOTES ON NEW OR RARE PLANTS.

AKEBIA QUINATA—FIVE-LEAVED.

Lurdizabalacea. Monœcia Hexandria.

MR. FORTUNE states this is one of the wild plants he discovered in Chusan. "I found it growing on the lower sides of the hills, in hedges, where it was climbing on other trees, and hanging down in graceful festoons from the ends of their branches. The flowers are brown, produced in short racemes, and sweet scented. A flower, when fully expanded, is much like a Boronia anemonifolia, but has only three petals. The plant appears to be hardy, and likely to be a desirable one for training over a trellis in the open air, and thus diffuse its fragrance around. It stands in the open ground at the London Horticultural Garden." Figured in *Bot. Reg.*, 28.

BRASSIA BRACHIATA—LONG-ARMED.

Orchideæ. Gynandria Monandria.

Mr. Hartweg discovered this plant in Guatemala. It has bloomed in the collections of Mr. Bateman and Messrs. Rollissons. The sepals and petals are narrow and very long; a pale greenish colour, tinged slightly with yellow; the lower portion spotted with dark. The labellum is a sulphur colour, spotted with dark. It is very singular and pretty. The flowers are produced in long racemes. Each blossom is eight or nine inches across. Figured in *Bot. Reg.*, 29.

CALCEOLARIA AMPLEXICAULIS—CLASPING-LEAVED.

A native of Peru and Colombia. Humboldt first discovered it; and recently Mr. Lobb, who sent seeds to Messrs. Veitch, of Exeter, with whom it has bloomed. It is a half shrubby plant, blooming in the way of integrifolia, corymbosa, and others, which are appropriated to beds during summer. The flowers are of a medium size, a bright yellow colour. It grows two feet high. Figured in *Bot. Mag.*, 4300.

CEREUS GRANDIFLORUS MAYNARDI—LADY MAYNARD'S.

Cactaceæ. Monandria Monogynia.

This very superb variety was raised by Mr. Kenney, gardener to Viscount Maynard, Eaton Lodge, Dunmow, in Essex. A flower of the C. speciosissimus was fertilized with the pollen of C. grandiflorus, the Night-blooming Cereus. The habit is trailing like it, and it always flowers, too, in the evening. The blossoms continue expanding for three days, and are eleven inches across and seven long, of a deep rich orange-red colour. It is a very distinct and handsome variety. Figured in *Pax. Mag. Bot.*

CESTRUM AURANTIACUM—ORANGE-COLOURED.

Solanaceæ. Pentandria Monogynia.

A native of Guatemala, and was collected by Mr. Skinner, who sent seeds to the London Horticultural Society. It is a deciduous, greenhouse, shrubby plant. The flowers are produced very numerously in terminal and lateral heads, very similar to the well-known Bouvardia triphylla in form, but of a very beautiful orange-yellow colour. It is a very beautiful object when in profuse bloom. The blossoms are highly fragrant too. It well merits a place in the greenhouse. Figured in *Pax. Mag. Bot.*

ECHITES FRANCISCEA—THE RIVER FRANCISCEA.

Apocynaceæ. Pentandria Monogynia.

A native of Brazil, and proves to be a fine fragrant hothouse climber. The flowers are produced in lateral racemes, of a rich rosy-lilac, with a yellow eye. Each flower is about two inches across. The plant has bloomed in the collection at Sion-house Gardens. Figured in *Bot. Reg.*, 24.

IPOMEA MURICATA—FINE-LEAVED.

Convolvulaceæ. Pentandria Monogynia.

Collected by Mr. Purdie in New Grenada. It has bloomed in the Royal Gardens of Kew. The foliage is in whorls, fine, like the Tetrathecas. The flowers are of a lilac-purple, small, about half an inch across. Figured in *Bot. Mag.*, 4301.

JACQUEMONTIA CANESCENS—THE HOARY.

Convolvulaceæ. Pentandria Monogynia.

It was collected by Mr. Hartweg in the province of Bogota. The type of the genus is the old Convolvulus pentanthus. It is a perennial trailing plant, which blooms very freely; the flowers are produced in lateral cymes, of from nine to a dozen in each. They are of a lively bright blue, and a separate blossom is an inch and a-half across. It makes a very pretty addition to our greenhouse climbers, blooming all the spring, summer, and autumn. Figured in *Bot. Reg.*, 28.

LEMONIA SPECTABILIS—THE SHOWY.

Rutaceæ. Pentandria Monogynia.

A native of Cuba, and has bloomed profusely in Messrs. Loddiges' collection. It is an evergreen shrubby stove plant. The flowers are somewhat like those of a Ruellia in form, of a very deep rich rosy-crimson. It blooms freely, and makes a pretty appearance for several months. Figured in *Pax. Bot. Mag.*

RUELLIA PURDIEANA—MR. PURDIE'S.

Acanthaceæ. Didynamia Angiospermia.

It is a half shrubby plant, growing to about half a yard high. The flowers are produced at the extremities of the shoots, two on each, of a rich rosy-crimson colour. A separate blossom is about an inch and a-half long. It has bloomed in the stove at the Royal Gardens of Kew. Figured in *Bot. Mag.*, 4298.

THE TREE VIOLET:

ITS CULTURE.

BY MR. THORNE, GARDENER TO J. RAYMOND BARKER, ESQ., OF FAIRFORD PARK, IN BERKS.

THIS interesting little plant forms a valuable addition to the conservatory, and, if properly cultivated, it flowers during the whole year. From long experience I have proved the following treatment answers well:—The cuttings from old plants strike freely in leaf mould and silver sand, adding a small portion of loam. When the plants have fairly rooted, I pot them off singly into three-inch pots; and after the first season's growth I remove the plants into six-inch pots, using two parts loam, one part leaf-mould, one part rotten cow-dung, the other part silver sand. In these pots they flower most abundantly for several years successively, without being repotted, only occasionally removing the top soil, and supplying in its place a little well-decomposed cow-dung. The plants are then placed in a cool frame, giving at all times plenty of air, only just exclude the frost. They are extremely impatient to heat, and during the summer the plants like to dwell in a humid atmosphere, with a slight shading, when the sun has great power; this prevents the appearance of the red spider, to which the plants are very much subjected. Some of the plants I have under my care are about thirteen inches in height; when they have attained eighteen inches high it is my intention not to remove the runners from the plants, but to encourage them to grow, and train to wires from the extremity down to the rims of the pots. I imagine then the plants will form very interesting objects.

OBSERVATIONS ON THE MECONOPSIS CAMBRICUM, AND OTHER ORNAMENTAL BRITISH PLANTS,

SUITED FOR GROWING IN A ROCK GARDEN.

BY AMICUS.

I HAVE taken in your nice little work, the FLORICULTURAL CABINET, from its commencement, and I find it furnishes me with much useful assistance in managing my flower garden, being without a regularly educated gardener.

I am induced to write to you in consequence of your requesting to hear from any one who has succeeded in cultivating the Meconopsis Cambricum, as I have done so for the last ten or twelve years, and with such success, that it has become rather a troublesome weed in a rock garden, made in an old stone quarry. I originally gathered the seed in North Wales; but it now sows itself, in shady moist places, in peat soil. I shall be glad to send you some seed in the autumn.—[We shall esteem the favour.—COND.]

I have for some years collected as many of the ornamental British plants as I have been able to grow in my rock garden; and as I see you are recommending the practice, I send a list of such as I have succeeded in retaining; and I have no doubt that, with more skill and attention than I am able to give, the number might be considerably increased.

Alchemilla alpina, Lady's Mantle.
———— arvensis, vulgaris.
Alisma plantago, Water Plantain.
Althæa officinalis, Marsh Mallow.
Anemone appennine, Wind flower.
———— nemorosa, Wind flower.

Anthericum serotine, Late-flowering.
Antirrhinum cymbalaria, Snap-dragon.
———— majus, Snap-dragon.
Aquilegia vulgaris, Columbine.
Arbutus unedo, Strawberry-tree.
——— uva ursi, Strawberry-tree.
Arundo phragmitis, Reed Grass.
Butomus umbellatus, Flowering Rush.
Caltha palustris; var. plena, Marsh Marygold.
Chrysosplenium alternifolium, Golden Flower.
Cistus guttatus, Rock Rose.
Clematis vitelba, Virgin's Bower.
Colchicum autumnale; var. fl. pleno, Saffron.
Convallaria migalis, Lily of the Valley.
———— verticellata, Lily of the Valley.
Cotyledon umbilicatus, Naval Wort.
Dianthus cæsius, Pink.
——— barbatus, Pink.
Digitalis purpuria, Foxglove.
——— alba, Foxglove.
——— rosea, Foxglove.
Dryas octopetala, Dryas.
Epilobium hirsutum, Willow Herb.
Erodium cicutarium, Heron's Bill.
——— moschatum, Heron's Bill.
Euphorbia cyperissia, Spurge.
Euphresia officinalis, Eye-bright.
Furmaria capreolata, Fumitory.
——— lutea, Fumitory.
Geranium lucidum, Crane's Bill.
———— pratense, Crane's Bill.
———— Robertianum, Crane's Bill.
———— sanguineum, Crane's Bill.
Geum rivale, Herb Bennet.
—— urbanum, Common Avens.
Gnaphalium dioicum, Everlasting.
Hippophæ rhamnoides, Sea Buckthorn.
Humulus lupulus, Common Hop.
Hypericum pulchrum, St. John's Wort.
———— quadrangulum, St. John's Wort.
———— humifusum, St. John's Wort.
Impatiens noli me tangere, Touch-me-not.
Iris pseudacorus, Iris.
Juniperus communis, Juniper.
Lotus corniculatus, Bird's-foot Trefoil.
Lycopodium selaginoides, Club-moss.
Lysimachia nemorum, Moneywort.
———— nummularia, Moneywort.
———— vulgaris, Moneywort.
Menyanthes nymphæoides, Buck Bean.
Meconopsis Cambricum, Welsh Poppy.

Myosotis palustris, Forget-me-not.
Myrica gale, Sweet Gale.
Narcissus, yellow and white, Daffodill.
Nymphæa alba, Water Lily.
——— lutea, Water Lily.
Orchis maculata, Orchis.
Parietalia officinalis, Pellitory of the Wall.
Polemonium cæruleum, Greek Valerian.
——— album, Greek Valerian.
Potentilla argentea reptaus, Cinquefoil.
Primula veris, of sorts, Primrose.
Rhodiola rosea, Rose Root.
Rhubus saxitilis, Bramble.
Saxifraga aizoides, Saxifrage.
——— geum, Saxifrage.
——— granulata, Saxifrage.
——— hypnoides, Saxifrage.
——— tridactylites, Saxifrage.
——— umbrosa, Saxifrage.
Sedum acre, Stone Crop.
——— album, Stone Crop.
——— Anglicum, Stone Crop.
——— dasuphyllum, Stone Crop.
——— reflexum, Stone Crop.
——— Telephium, Stone Crop.
Solanum dulcamara, Nightshade.
Statice armeria, Thrift.
Valeriana rubra, Valeriana.
Vaccinium Vilis Idæa, Crowberry.
Veronica Beccabunga, Speedwell.
——— serpyllifolia, Speedwell.
Vinca major, Perriwinkle.
——— minor, Perriwinkle.
Utricularia vulgaris, Hooded Milfoil.
Soldanella Alpinum, Soldanella.
Silene maritima, Catchfly.
Ruscus aculeatus, Butcher's Broom.
Conferva ægagropila, Conferva.

Many others I have tried, and lost them; but all these have lived several years.

FERNS.

Asplenium adiantum nigrum.
——— ceterach.
——— ruta marina (pot).
——— scolopendrium.
——— trichomenes.
Blechnum Boreale.
Hymenophyllum Wilsonii (pot).
Polypodium aculeatum.
——— aronicum,

Polypodium Cambricum.
——— dryopteris.
——— filex fæminea.
——— mas.
——— fragile.
——— oreopteris.
——— vulgare.
——— dilptatum.
Pteris crispa.
Osmunda regalis.
Asplenium marinum (pot).

Of the plants you recommend I have not succeeded in getting the Anemone pulsatilla to grow out of doors, though I kept it for many years in a cold frame. The Drosera anagallis tenella, Pinquicula vulgaris, I have tried in many ways, but have always failed to keep them through the winter.

THE CAMELLIA:

ITS PROPAGATION AND CULTURE.

MR. RICHARD SANDFORD, a writer in the *Gardeners' Chronicle*, recommends the months of April and May as being the best time for working Camellias, the young shoots being then generally stronger than in the autumn, which is the only other season in which the process can be adopted with chance of success. As soon as the season of bloom is over, which in ordinary sized plants will happen about April or May, Mr. S. recommends the plants to be then taken into a vinery, and " engrafting commenced, when the young shoots of both double and single kinds begin to swell, which they seldom fail to do, after being subjected a week or a fortnight to the heat of the vinery. Suppose the stock to consist of six branches, and that as many double varieties are to be worked on it, the first thing to be attended to is, to take a clean healthy shoot of the last year's growth from each double sort about six inches in length, and cut it off by a joint; the incision in the stock should be as near the separation of the branches from the stem as possible, and should be about an inch and half in length. The bark on one side should be entirely removed, with a small portion of the wood, and the same must be done with the scion, so that the incision in both may exactly coincide. It is also advisable to tongue them, as it is generally observed that the adhesion first takes place where the tongues unite. The incision in the scion should be made about an inch and half above its base, as nearly the whole of that portion of the wood is to be immersed in a phial, always full of water, to keep the shoot in a growing state. This phial must be tied firmly to a branch of the single stock, to prevent it from falling off. When the branch of the double variety is applied to that of the single kind, great care must be taken that the bark of both coincide, and that the cuts of both are of equal length. They must then be bound as firmly and closely as possible with matting, and some moss wrapped round them, which should be kept moist. The portion of the scion below the junction must then be immersed in the phial; and if this is kept full of water, so as to promote growth, the adhesion will take place in a month or six weeks. It is, however, advisable to allow the phial to remain some time longer, and not to remove the bandage till the scion has made some progress in growth.

" In grafting young stocks, the most convenient method, and to be sure of success, is to prepare a slight hotbed, about 70°; or if there is no great quantity of stocks to be worked at one time, a cucumber or melon frame will answer. Having procured grafts from the best double varieties, cut down the stocks to within two inches of the pot, and either whip-graft them with a tongue, or saddle-graft them; then clay them round in the usual manner, and plunge the plants into the hotbed, covering them over closely with hand-glasses, and they will readily unite in a month or six weeks. I have practised this method of working small Camellia stocks with great success. The soil I have found the Camellia to thrive best in is two parts chopped turf, of a loamy nature, one part turfy peat, one part rotten dung from an old cucumber or melon bed, with a small portion of sand, all well mixed together twelve months previous to the potting season."

The mode of culture found most successful is thus detailed:—

" As the Camellia is a native of a warmer climate than ours, it therefore requires a greater degree of heat than even a greenhouse can afford during the early summer months to cause it to shoot out vigorously, and to thoroughly ripen its flower-buds for the ensuing season. In no situation does the Camellia thrive better than in a vinery under the shade of vines; it participates in all the heat which is usually given to a house of that description. The usual time of removing the plants from the greenhouse to the vinery is about the middle of May, or as soon as the blooming season is over; previous to this, examine every pot, and see that they are well drained, as nothing is more injurious to the Camellia than stagnant water about its roots; repot any that may require it before removing them into the house. They should be watered over head with a syringe twice or thrice a week, to remove any dust that may have settled on their leaves, and to refresh them. During this period, also, plenty of water should be given them at the root, as the heat soon dries the soil in the pots, and they should be kept at all times rather damp than otherwise, provided the pots are well drained. As soon as the buds are well formed, which will be about the end of August, they should be then taken to the back of the greenhouse, or to any shady place, until the end of September or the beginning of October, according to the state of the weather, then to be removed to the greenhouse, and to have as much air admitted to them as possible. In this state their buds will gradually expand; and when full blown, will remain much longer, and appear much finer, than if the plants had been kept in a close warm house. Great care must be taken not to wet the flowers, as it will completely spoil their beauty, and cause the petals to fall off."

METROPOLITAN FLORAL EXHIBITIONS.

THE HORTICULTURAL SOCIETY.

Our former volumes contain very interesting and useful records of the annual floral meetings, held in and around the metropolis of our country, on a scale of unparalleled excellence and magnificence. To these exhibitions are brought from all parts of the kingdom the finest specimens of plants and flowers in their various classes, which the unequalled skill of the gardeners of Great Britain have produced, as well as nearly every recently introduced new and handsome plant or flower; so that at once may be seen an assemblage of beauty and novelty in that high state of perfection which a nation of practical and amateur florists have been successful in producing.

We have had the pleasure to observe an improvement in the floral productions exhibited each successive season; and from what we witnessed at the exhibitions held of the Horticultural Society at Chiswick on the 8th of May, and at the Royal Botanic Society at the Regent Park Garden on the 12th, the present year's succession meetings are likely to exhibit a considerable improvement upon any previous one, and render them more attractive in proportion.

The first exhibition for the season was held by the Horticultural Society, and for the period of the year the productions shown were never equalled.

We cannot give entire in our present Number the description of each of the beautiful productions, but shall commence with the new and rare single specimens.

A box of plants from Kew (not for competition) contained two varieties of Siphocampylus microstoma, named rubra and viride, one having green leaves and the other red beneath. Scutellaria ventenatii, with its rich brilliant red flowers, was much admired; it deserves to be grown wherever it can be admitted; it is particularly beautiful and ornamental. Achimenes cuprea, with its deep copper-brown hairy leaves and flowers. New plants for competition were as follows:—

By Messrs. Veitch.—Hoya campanulata. The flowers are not interesting in appearance, but very fragrant; it is a stove climber. Vanda (a new species), with tawny-coloured flowers. Dendrobium (new species), with rich orange-coloured flowers, in fine racemes. Mr. Ayres had a new species of Gompholobium, in the way of G. holymorphum, but richer-coloured flowers.

May 4.—The objects produced were few in number, a circumstance no doubt owing to the large exhibition at the garden at Chiswick being so near at hand. From Mr. J. Rigby, nurseryman, Brompton, was a very handsome specimen of Eriostemon neriifolium. A Banksian Medal was awarded it. A similar award was made to Messrs. Weeks for a fine Torenia asiatica.—Mr. Glendinning, of Chiswick Nursery, sent a novelty in the shape of a Daviesia, an odd-looking plant from the coast of New Holland, with flowers handsome enough, but with a singular foliage, if it may be so called, for it was rather an extension of the stem. This last operates in some measure as a drawback on the beauty of the plant, giving it a bare appearance. A Certificate was awarded it.—From Mr. Donald, gardener to Mrs. Lawrence, of Ealing Park, were Vanda cristata; a neat Dendrobium secundum;

Oncidium longifolium; a variety of O. luridum; and a Hippeastrum, nearly allied to H. vittatum. A Certificate was awarded for the Vanda and Dendrobium.—From Mr. Pawley, of Bromley, was a seedling Azalea, with white flowers, occasionally striped with pink in the way of Gledstanesii, but less handsome than that variety. It was named Striata purpurea.—Mr. Catleugh, of Chelsea, also sent two seedling Azaleas, one a deep orange scarlet, named Ignescens splendida; the other a rosy pink, named Rosea delicata.—Mr. Bruce, of Kingston, sent a blue Cineraria, named Mazarine.—From Mr. Carter, gardener to the Duke of Northumberland, at Syon, was a trailing Achimenes, with silvery-streaked leaves, and a small bright scarlet flower, with a yellow throat. It was found by Mr. Purdie, near Bogota, in New Grenada, in January, 1846. The specimen exhibited had only one flower on it; no correct idea, therefore, of the beauty of the plant could be formed.—Mr. Bunney, nurseryman, Stratford, sent a variety of Cattleya intermedia, remarkable for its rich deep purple lip.—From Mr. Low, of Clapton, was a plant of Camellia miniata; the blooms were much smaller than those on the plant submitted for inspection last week, and the rich crimson centre was completely driven out of them by the plants having been forced in a strong heat, in order to get the flowers forward for the meeting.—From Mr. Cuthill, of Camberwell, was a group of Seedling Cinerarias, and a plant of Sparaxis grandiflora, one of the handsomest of its tribe, and perhaps one of the most cultivable. Also a piece of a draining-pipe, made of compressed peat-moss or bog, the invention of Mr. Smith, of Deanston. It was extremely hard, and was stated to be very durable. The cost of making one thousand a foot long, by Ainslie's draining machine, was mentioned to be about *5s.*—From the garden of the Society were various plants, more especially a large mass of Acanthophippium bicolor, Chysis bractescens, the spotted variety of Oncidium luridum, a double yellow Cape Oxalis, named Caprina; Begonia suaveolens, and Tropæolum edule, an orange-yellow flowered species, whose roots form an indifferent kind of food to the natives of the west coast of America. It was scrambling over a branch of a Larch, whose lateral twigs were left unpruned, a mode of training attended with little or no trouble, and rendering the plant much more natural in appearance than the artificial contrivances usually adopted for exhibiting the beauty of such things.

From the plants entered at the Regent's Park show as SINGLE SPECIMENS, the judges made the following selections for reward:—First. Messrs. Lucombe, Pince, and Co., Exeter, for Erica elegans, a magnificent specimen, in excellent condition. Second. Mr. Clark, for Pimelia spectabilis, three feet by four, fine. Third. Messrs. Lucombe, Pince, and Co., for a conical Eriostemon buxifolium, five feet high, and four across the base; Mr. Barnes, for Erica intermedia; Mr. Hunt, for a handsome dwarf Erica aristata major, two feet and a-half across; Mr. Fraser, for a large Erica campanulata. Fourth. Mr. Barnes, for a large double red Indian Azalea; Mr. Wood, gardener to J. G. Seager, Esq., Poole, for a tall, narrow, conical Eriostemon buxifolium; Mr. Fraser, for Daviesia latifolia; Mr. Green, for Azalea indica variegata. Fifth. Mr. Malyon, for a good Erica Pattersoni; Mr. Bray, for Epacris grandiflora; Mr. Stanley, for Kennedya inophylla multiflora; Messrs. Veitch, for fine plants of Eriostemon cuspidatum, and E. buxifolium; Mr. W. Pamplin, for Epacris grandiflora. Among other specimen plants exhibited was a handsome Tropæolum azureum from Mr. Green; Hibbertia perfoliata from Mr. Reynell; a fine Nepenthes distillatoria (not rewarded because entered as a plant "in bloom") from Messrs. Lucombe and Co.; Torenia asiatica from Mr. Hamp; and a hybrid Tropæolum from Mr. Bunney, of Stratford; this latter is not remarkable for beauty, for it has a dull brownish red spur and calyx, tipped with green, resembling T. pentaphyllum, and small straw-coloured petals like a pale T. brachyceras.

Of New or Rare Plants in bloom the first prize was given to Eriostemon scabrum, a handsome species, with linear warty leaves and pinkish blossoms. The second was awarded to a New Holland shrubby species of Gompholobium from the same establishment: this plant has pinnate leaves of seven subulate leaflets, and the tips of the young shoots have a peculiar woolly appearance; the flowers are clear yellow, and pretty. The third prize was given to Messrs. Henderson, Pine Apple-place, for a small Bossiæa, with minute opposite cordate leaves, and largish orange yellow flowers, brown on the outside. Extra prizes were given for Hoya campanulata from Messrs. Veitch; and to Gardenia Stanleyana from Messrs. Rollisson; and also to Rhododendron macranthon, a handsome white spotted variety, from the same. Messrs. Henderson also sent Puya Altensteinii. Messrs. Rollisson had Impatiens platypetala, Gesnera Suttoni alba, a curious flesh-coloured variety; Tetratheca verticillata, and Rhododendron Albertus. Mr. Barnes sent a terrestrial Orchid from Algiers; and Mr. Smith, of Norbiton, sent three hybrid Rhododendrons,—cumulatum, salmon-buff, with buff spots; imperiatum, pale rosy lilac, with buff spots; and floribundum, deeper rosy lilac, spotted in the same way. Of plants of this class not in bloom, the first prize was given to a magnificent specimen of Nepenthes Rafflesiana, with six perfect pitchers; this came from Messrs. Lucombe, Pince, and Co. The second was given to Messrs. Veitch, for Platycerium grande; and an extra award was made to Bichoffia javanica from Mr. Glendinning, Chiswick.

As new hardy hybrid shrubs, Mr. Smith, of Norbiton, showed a collection of Rhododendrons, blush and buff coloured; the latter being a break in the right direction, but partaking too much of a pale straw colour to be of much value. A true yellow-flowered Rhododendron is still a desideratum. The sorts were croceum, buff; aureum, gemniferum, nearly white; patulum, buff; Paxtonianum and pulchrum, the latter two blush coloured. Mr. Jackson, of Kingston, also sent a Rhododendron, named campanulatum.

Notwithstanding the succession of unfavourable weather, the Pelargoniums appeared in great perfection, and contributed their due share to the floral beauty of the exhibition. In the Amateurs' Class, for collections of twelve new and first-rate varieties, cultivated with superior skill, Mr. Cock, of Chiswick, took the lead; to him was awarded the Gold Banksian Medal. His collection contained Hector, Milo, Sultana, Sylvia, Emperor, Pearl, Zanzummim, Negress, Isabella, Rosy Circle, Arabella, and Orion. The Silver Gilt Medal was not awarded; and Mr. G. Wiltshire, gardener to J. G. Reynell, Esq., received the Silver Knightian for Rosy Circle, Hebe, Coronation, Nymph, Sultana, Arabella, Madeline, Lady Villiers, Zanzummim, Duke of Cornwall, Duchess of Sutherland, and Hector. In the Nurserymen's Class, the Gold Banksian Medal was awarded to Mr. J. Dobson for Mustee, Hebe's Lip, Gulielma, Seedling Bacchus, Isabella, Rosamond, Honora, Cinderella, Arabella, Cracker, and Blanche. Mr. Gaines, of Battersea, received the Silver Gilt Medal for Prince Alfred, Angelina, Sir H. Smith, Effendee, Gazelle, Lord Hardinge, Sunset, Aurimana, Miss M. Buller, Xarifa, Brenhilda, and Sorcerer. For collections of twelve varieties in 11-inch pots, the Gold Banksian Medal was awarded to Mr. Parker, gardener to J. H. Oughton, Esq., for Unit, Lord Chancellor, Superb, Duke of Cornwall, Zanzummim, Luna, Sultana, Erectum, Lady Sale, Madeline, Enchantress, and Queen of Beauties. In the Nurserymen's Class, Mr. J. Dobson, gardener to Mr. Beck, of Isleworth, received the Gold Banksian Medal for Mustee, Resplendent, Rosy Circle, Desdemona, Arabella, Orion, Zenobia, Hebe's Lip, Favorita, Susanna, Isabella, and Marc Antony. And to Mr. Gaines was awarded the Silver Gilt for Matilda, Lady Sale, Cossack, Coronation, Rising Sun, Erectum, Emma, Zerlina, Duke of Cornwall, Floridum, Lady Isabella Douglas. These three collections were composed of very large plants, in fine health, with a profusion of bloom. A Large Silver Medal was awarded to Mr. Gaines for a collection of six Fancy Pelargoniums, comprising Jehu, Maid of Anjou, Queen Victoria, Anaïs, Lady Rivers, and Ibrahim Pacha, the three last mentioned being the most distinct.

The June shows, which comprise the best and most select plants, will have taken place before our next. We, therefore, purposely omit extending more particulars till our July Number, when a useful descriptive account shall then be given.—CONDUCTOR.

REGENT'S PARK GARDENERS' SOCIETY.

April 8.—The Prize Essay (for which there were two competitors) on the Principles of Grouping Colours in Flower Gardens, illustrated by a plan, was read and discussed. The prize of 1*l.* was awarded to Mr. W. Elliott, of Pine-apple Nursery. An outline of the arrangement of colours runs thus:—" It is found that in nature there are only three primary colours, red, blue, and yellow; and from the mixture or union of these all other tints are produced. It being the case when certain colours are placed in juxtaposition the brilliancy of each is impaired, and a disagreeable effect is produced, whilst when some others are brought in contact the brilliancy of each is heightened, and a pleasurable effect is produced. It has been demonstrated that the opposite colours, when brought together, produce harmony; it follows that we should bring only those colours together which offer the greatest contrast. The following is a simple method of finding the opposite colour:—From any number of concentric circles, divide the first into three parts, the second into six, the third into twelve, and so on; then, in the first circle, place the three primary colours, and the same in the adjoining spaces in the second circle; and in the alternate spaces of the second place the mixture, as before mentioned, which will contain red, purple, blue, green, yellow, and orange; and it will be found that red is opposite to green, purple to yellow, and blue to orange. By continuing the same process through another circle, we shall have twelve different shades of colour, and so on indefinitely. It may be mentioned that white is substituted for green, than which it answers the purpose better; for white being merely the absence of colour, it may be used to separate any two discordant colours. In applying these principles, a different application must be made when the flower-garden is on turf; in which case the warm colours or tints, as reds and yellows, ought to prevail: but when on gravel, blues and greens should predominate. Mr. Elliott followed this by examples of how linear, or circular, or massing, or zone arrangements of colours might be disposed of; and observed that notes should be taken in autumn of those things which suit best, and concluded by giving a well-selected list, with the colour and height of the flowers (adapted for the plan represented), for an autumn display."—*George M'Ewen, Sec.*

ON THE TREE MIGNONETTE.

BY A FLOWER GARDENER.

THIS plant, in bloom during winter and early spring season, is a most valuable one, and is well deserving the attention of every amateur florist who has the means at command, and of every gardener to secure. One certain mean by which that may be realized is to grow it, as it is termed, to a Mignonette Tree; that may be accomplished by the following simple process of culture:—

In the spring season a sufficient number of plants should be raised from seeds. The plants do not bear removal well. I have found it best to sow a few seeds into each thumb-pot; and when the plants are up, thin all away but one. As they progress, remove them entire into 48-sized ones, then 32's, and finally 24's. Keep them in a frame, so that easy control may be appropriated to them, and their growth be promoted. The principal stem must be secured to a neat stick; and as side shoots push forth, pinch them off close to the main stem, to the height it is desired the plant shall finally be. A very especial point, too, is to remove, at the earliest period, all infant blossoms, till the head of shoots is properly formed. By attention to sowing at a different period, or by stopping the side shoots later, plants in vigour may be secured at successive times.

At the autumn, the plants so prepared should be taken into the greenhouse, &c., placing them in light situations, and as near to the glass as circumstances will allow, and where it will bloom profusely. There is a variety of this plant, which is more vigorous than the original; when it can be obtained it is desirable: when once secured, it may readily be perpetuated. By so small a degree of attention, this universally esteemed plant may be formed into beautiful ornamental plants, and obtain a half shrubby character, and be a delightful winter inhabitant for sitting-room, conservatory, or the greenhouse. A liberal drainage should be given, and a rich turfy loam, prepared a year by chopping, &c., with an equal portion of well-rotted vegetable mould for it to grow in; not a *sifted* but *chopped* compost.

THE HAWTHORN AND ITS VARIETIES.

In the last Number of the Cabinet appeared the remarks I had penned relative to the Hawthorn. I now send a continuation of the same, which I hope will appear in the June number, the season of those lovely trees still blooming.

The thorns begin to flower early in May, and continue till the latter end of June, the different species producing their flowers in succession; the earliest is Cratægus purpurea. This is not a handsome tree; on the contrary, it has a miserable, and rather a stunted appearance, but its flowers are remarkable for their black anthers, and the fruit for the variety of its colours, white, pale yellow, red, and purple haws being found on the same tree. C. nigra is another early blossoming kind, with very small black fruit; this tree is said to attract nightingales, because, according to Mr. Loudon, "it is particularly liable to be attacked by insects, and because numerous caterpillars are to be found upon it about the time that nightingales are in full song."

In May and June appear the blossoms of the common hawthorn, and those of all its numerous varieties. Perhaps no tree has produced more varieties than this. Loudon enumerates fifty kinds, and I believe there are many more. The most remarkable of these is the Glastonbury thorn, which is generally in flower at Christmas. The Glastonbury thorn is, indeed, in leaf, flower, or fruit almost all the year; and it has, generally, all three at once on it at Christmas. The original tree grows at Glastonbury; and, according to the legend, was the staff of Joseph of Arimathea, which being stuck into the ground on Christmas-day miraculously took root, and instantly produced leaves, flowers, and ripe fruit. Queen Mary's thorn has drooping branches, and long fleshy fruit, which are good to eat. The original tree is said to be still standing, and, if this be true, it must now be nearly 300 years old.

The other varieties of the hawthorn have probably originated from seedlings observed in some hedge, and transplanted into a nursery. In this manner the new beautiful bright scarlet hawthorn was discovered, and also the double-flowered pink kind, which is so ornamental in our shrubberies, both when its blossoms first expand, and are of a pure white, and when in about a fortnight they begin to take a pinkish tinge, which deepens gradually as they decay. Some of the varieties have bright yellow fruit, and in some it is quite black; in some the leaves are shaped like those of the oak, and in others they are slender and deeply cut, like those of the fern. One kind grows stiff and upright, like the Lombardy poplar, and the branches of another kind are curled and twisted together like gigantic ringlets. In some the leaves are variegated, and in others smooth and shining: in short, it is scarcely possible to set any limits to the varieties. The red-blossomed hawthorn was one of the earliest discovered, it having been found in the time of Ray; and we may easily imagine what a valuable acquisition it must have been to the slender stock of flowering shrubs possessed by our ancestors. It is somewhat remarkable that all the red-blossomed hawthorns have not been propagated from the same tree, but that several red-blossomed seedlings have been found at different times, and at different places. Nearly all the other varieties appear to have been discovered accidentally; and their number is accounted for by the fact of more plants of the hawthorn being raised from seed than of any other tree, from the great length of time that the hawthorn has been used for a hedge plant. There is a double white blossomed kind very handsome. The new crimson and scarlet, too, are very splendid and showy.

The cockspur thorn is a noble species, and it has some singular varieties. One of these, C. crus-galli salicifolia, has a flat head, spreading like a miniature cedar of Lebanon. A dwarf sub-variety of this, which does not grow more than five feet high, is well adapted for planting in children's gardens. C. coccinea, or the scarlet-fruited thorn, C. glandulosa, and C. punctata, are all well worth growing in a shrubbery, or on a lawn; and when seen together, they will be found very distinct.

The principal large-fruited thorns are Cratægus azarolus, C. aronia, C. orientalis, or odoratissima, and C. tanacetifolia. These plants are all late in flowering, seldom expanding even their leaves till the latter end of May or beginning of June, and being sometimes much later. The fruit of all of them is not only eatable, but very good. C. orientalis and C. tanacetifolia have both whitish leaves; the fruit of the first is of a brilliant coral colour, and of the latter yellow. There is a variety of the first species, with fruit of a port-wine colour; and Lee's seedling variety of the latter is one of the handsomest plants of the genus. Notwithstanding the resemblance of the leaves, these two species are easily distinguished, not only by the colour of the fruit, but by their habits of growth; C. orientalis being a handsome spreading tree, and C. tanacetifolia upright-growing.

One of the late flowering varieties is C. parviflora, which does not flower till late in June, and which bears pear-shaped green fruit. The leaves of this species and its varieties, and of C. virginica, are very small, C. cordata is the latest flowering of all the kinds, as it rarely produces its flowers before the middle of July. There are many other species, and among others C. microcarpa, with its brilliant bright scarlet fruit, and C. mexicana, with its large yellow fruit, looking like golden pippin apples; but we have said enough to show what ornamental plants the thorns are, not only in their flowers, but in their fruit. Cratægus, or mespilus pyracantha, may be added to the above, as it is a very ornamental shrub, not only from its evergreen leaves, but from its brilliant scarlet berries, which are so abundant as to occasion the French to call it *buisson ardent*. In short, every tree belonging to the genus is worth growing; and I am glad to see that in the "Arboretum Britannicum," and Dr. Lindley, too, in the "Botanical Register," have contrived within the last two or three years to bring ornamental thorns into fashion. I am confident that they cannot recommend them beyond merit, whether as grouped along with other showy blooming trees, or when standing upon the grass lawn.

The Amelanchiers, the commonest species of which is well known under the name of the snowy Mespilus; the Coteneasters, with their coral berries; the ornamental kinds of Pyrus, including the mountain ash, the Siberian crab, the garland flowering apple-tree, and showy Chinese crab-tree; the Photinia serrulata, with its large showy bunches of flowers, and beautifully-tinted leaves in spring and autumn; the loquat-tree, with its large woolly leaves; the Nepal white-beam tree, and many others, deserve especial notice.

Among the flowering trees of May and June may be reckoned that splendid climber Wistaria sonsequana, or, as some call it, Glycine sinensis. The flowers of this tree resemble those of the laburnum in form, but are of a delicate lilac. Nothing can exceed the vigorous growth of this tree, or the profusion of its blossoms; the specimen in the Horticultural Society's garden at Turnham Green extends nearly eighty yards along the wall. This splendid plant is a native of China, from which country it was brought in 1816. At its first introduction, and for a year or two afterwards, plants were six guineas each; but they are now to be had in any nursery for a shilling or eighteen-pence.

Next to the Wistaria may very appropriately be placed the laburnums, which, notwithstanding their beauty, are now become so common as to be little valued. Some of these are sweet-scented and remarkably long in their drooping racemes of flowers. The purple-flowered laburnum, as it is called, though in fact its blossoms are of a dirty pink, is a hybrid between the common laburnum and the purple cytisus, and it possesses the extraordinary power of reproducing its parents. Trees of this kind in different parts of the country have been known to produce a sprig of the purple cytisus from one branch, and of the common laburnum from another, without any grafting, and yet each quite distinct.

The Judas-tree (Cercis siliquastrum) is another ornamental tree belonging to the Leguminosæ. This tree produces its pretty pink flowers on its trunk and thick branches, and the flowers have a slight acidity that makes them form an agreeable dish, when dipped in batter and fried as fritters. The tree takes its name from its being supposed to be that on which Judas hanged himself; but Gerard gravely assured us that this was not the case, as he hanged himself on an alder.

The peat-earth plants belonging to the order Ericaceæ are a host in themselves. The rhododendrons, the kalmias, the arbutus, the heaths, and their allied species, are all so beautiful that no garden should be without them. The rhododenerons, it is well known, vary very much in the colour, though not much in the form, of their flowers, and some of the hybrids between the Nepal-tree species and the common kinds are extremely splendid. The rhododendrons are generally considered American plants; but one of the commonest kinds, R. ponticum, is a native of Asia Minor. The number of varieties and hybrids almost exceed belief, amounting to more than one hundred. It has been said that the honey which Xenophon tells us produced so injurious an effect on the Greeks in their celebrated retreat, was produced by the flowers of this shrub; but others attribute this poisonous honey to the Azalea pontica.

VEGETABLE MORPHOLOGY.

Looking at vegetables in their generality, we may say that a plant consists of three parts, the leaf, the stem, and the root; although, in the lower classes, it is often the case that one or two of these are wanting. Advancing again, as in the case of the cell, we find that a plant may be composed of one of these individuals, or phytons as they have been called, producing its like, the progeny immediately obtaining an independent existence; or the new individuals may remain attached almost to an unlimited extent, constituting highly compound plants, the different organs or phytons of which undergo very various modifications of form, and acquire very distinct functions. Thus in a flowering plant, or, as a stronger example, in a forest tree, every leaf is to be considered as essentially a distinct individual; but as a member of a compound body, working for the general benefit of the whole. In obedience to the requirements of this, they undergo modifications to fit them to execute distinct offices in the economy of the plant; some are destined to the nutritive functions, others to the reproductive; and among these latter we find them still further losing their individuality, and becoming blended in all their parts with their fellows, until almost all trace of their origin is lost. This is the substance of the doctrine of morphology, the most important generalisation in the whole science of botany, as affording a clear and systematic view of the vegetable kingdom as a whole, in addition to the important relations it establishes with zoology.—*Henfrey's Outlines of Structural and Physiological Botany.*

THE PINK.

In several of our volumes the subject of a standard whereby the flowers of the Pink should be judged was discussed, so as to reconcile the growers of the south and north to an uniform one. It, however, remains unsettled; and a suggestion has been made by a writer in the *Midland Florist* to the following effect:—

" I want to see Pinks (flowers) with a leaf, something like a Camellia, smooth on the edge, and with some substance in it, and which I have no doubt may and will be obtained in a very few years, by strict attention being paid to collecting seed from sorts that have good properties, particularly a good leaf.

" I beg to suggest the following code of rules for the Pink:—The petals of the flower should be round and smooth on the edge, and go well to the shoulders, to prevent them being spade-shaped. The flower to be perfectly flat, except a crown formed with a few of the inner petals. No flower to contain less than twelve petals, the colour to be well defined, the white to be clear and distinct. The lacing and eye, or centre, to correspond in colour. The lacing to be well laid on to the edge of the petal, and not to show a white fringe outside the lacing; the petals imbricating each other neatly, and showing the lacing distinct. The pod of the flower to be nearly straight, and not liable to burst, so that it will hold the petals close together; otherwise the flower will show what florists term an open throat, and not form a perfect round eye, which is a most essential requisite in a good flower.

" The plain or black and white pink, which we hold in great esteem here, should be judged by the above rules, except the lacing.

REMARKS ON WARDIAN CASES FOR PLANTS.

BY K. C.

Having read with much interest an article which appeared in the April Number of the Floricultural Cabinet on the growth of plants in Wardian cases, I am induced to send you the results of my own attempts, and to solicit some further information from yourself or your numerous correspondents.

The case in which my plants are grown is made according to the directions given in the second volume of "Chambers's Information for the People." There ought to be a very liberal supply of broken earthenware for drainage, as the success of the experiment depends very greatly on this particular. The best situation is, of course, the south, taking care to shade the plants in the summer. Unfortunately I am obliged to be satisfied with an eastern or western aspect, and, consequently, lose the benefit of the sun in the winter months. However, I have got on pretty well notwithstanding.

I find all the hard-wooded and thick-leaved kinds of hothouse plants to flourish by far the best. The Hoya Carnosa grows most vigorously; so do the Franciscæas, Gardenias, Cypripediams, Cactus, Myrtle Orange, Pergalaria ordontissima, &c. I am making another attempt with some Tropical Ferns, but I have found them invariably to damp off; and yet this class of plants is particularly recommended for the above mode of culture. Perhaps you would have the kindness to suggest some manner of treatment which will obviate this casualty.

I should also feel obliged, through the medium of yourself or friends, for a list of plants which have been most advantageously grown in this manner, as well as of a few of the smaller-sized Orchideæ which would be likely to answer. I know of no method of cultivating plants in a room so interesting and so free from trouble as this; and I am certain that many lovers of floriculture will be greatly obliged by any communications you may be pleased to make respecting the best arrangement and treatment of this cheap and portable conservatory.

THE RUNNING OF CARNATIONS.

BY FLORISTA.

This subject has caused more discussion than almost any other connected with gardening, except the breaking of Tulips. Before this subject is fully discussed, the facts should be fairly considered; and those which are well established are curious. First, not only do the several layers of the same plant come one run and another good, but on the same plant one will come fine and the other coarse, although within half an inch of each other on the same stem. Nay, more, the same flower will come half run and half fine. One would think this settled the question about the soil having nothing to do with it. Secondly, run flowers planted out (which, if they are scarce, they should always be) will occasionally return back to the fine condition, as completely as the Tulip will break from the breeder, although grown in the same description of soil. This seems another proof that the soil has nothing to do with it. We cannot have any reason to suppose that the compost they are growing in can affect one flower, or half a flower, and not affect the rest of the bloom or blooms. Let any one who discusses this subject take these facts, which are indisputable, into consideration. There is a singular propensity to run to a self in all highly-coloured Carnations, and to remain selfs several years; but there is much certainty of their coming back to the fine variegated character, in the same way that a breeder Tulip will break into fine colours. But the Carnation is unlike the Tulip, in first blooming well and variegated; whereas the Tulip rarely or ever blooms in any but the breeder, or self form. It has been said by old Carnation growers that they would sooner have some kinds after they have been recovered from selfs than before they have gone back to such selfs. Cartwright's Rainbow is especially fine when it comes back from the run colour. It has, however, been very commonly the case that run flowers, as they are called, are thrown away altogether. This is wrong, if the sort is at all weakly; for nothing is sooner lost than the stock of a variety that yields but little grass. It is a most extraordinary fact, that among many Tulips that have gone back to the breeder, and have broken again, they have proved finer than ever; and yet there is nothing upon which so much nonsense has been written, and so little sound information given, as the breaking of Tulips and the running of Carnations.

LIGHTBODY'S SEEDLING RANUNCULUSES.

BY H. DICKSON.

In some of the recent numbers of the Cabinet I notice that particular attention is directed to the culture of that modest, beautiful flower the Ranunculus. The following descriptive list of eighteen of Lightbody's superb seedlings I received from him, and having seen the flowers last season, I can attest they are correctly described, and merit all that is said of them. Collections should be visited, or stands at shows be examined this season by persons desirous of having a distinctive variety of these admirable beauties.

Annot Lyle.—A very distinct rose edge, of beautiful form, and clear white ground.

Chimpanzee.—A very large and full flower, deep rose edge, on a clear white ground.

Commodore Napier.—A very large and full flower, free bloomer, deep red edge, upon a clear straw ground.

Constantia.—A flower of very fine form, a red edge, on a rich yellow.

Colonel Dennie.—Rich yellow ground, edged with deep red, perfect shape.

Dr. Horner.—A splendid flower, of fine form; the petals are of great substance, and edged with purple.

General Robertson.—Remarkably double flower, distinctly marked with fine dark crimson, upon a creamy ground.

James Montgomery.—A very dark purple edge, form first-rate, creamy ground.

Lady Sale.—A rose spot, of splendid form, very distinctly marked.

Larne.—Of very fine form, a purple mottle upon a white ground.

Nereus.—A flower of extraordinary size, very full, and delicately marked, a light rose spot, upon a snowy white ground; this is one of the finest ever raised.

Princess Royal.—A beautiful variety, dark edge, upon a brilliant yellow ground.

Prince Albert.—A very large and double flower, a dark brown edge, upon a clear straw ground.

Queen Berengeria.—A beautifully formed flower, rose mottled, upon a white ground; an exquisite variety.

Richard Dixon.—A heavy purple edge, excellent form, ground of a clear white; a very large and massive flower, newly raised, and a very free bloomer.

Sir John de Græme.—A flower of large size and splendid form, a fine purple edge and cream ground; one of the finest varieties in being.

Talisman.—An exquisitely beautiful flower, fine purple edge, upon a pure white ground.

Zebina.—An exquisite flower, beautifully marked, a rose spot, upon a white ground.

TO DESTROY THE SCALE.

Mr. Barnes, of Bicton, recommends a plan, which he says is quite effectual, and costs scarcely anything but the labout. He says, "Take of good wood ashes (dry) one peck; place this in a tub, pouring in twelve gallons of soft water, and allowing it to soak for twelve hours, stirring it up occasionally; then take of fine soft clay, and of fresh cow-dung, one peck each, and mix them well together into a 'puddle;' add two pecks of fresh chimney soot, and a peck of fine charcoal dust that has not been wetted; place these ingredients together, and add enough of the lye of the wood ashes to bring it to the consistence of workable paint, stirring it well up with an old broom. This must be allowed to stand for two or three days, and will then be in good condition for painting over the stems, branches, and every part of the plant affected with the scale, which it will readily extirpate.

HOW TO DESTROY MICE IN A GARDEN.

Bury pickling-jars in the ground, leaving the neck-hole even with the surface. Put a little water in the jars. The writer has taken upwards of 220 mice in this way in his garden, in the course of the last three months. This is an improvement on the plan adopted some years ago in the New Forest, where many thousands of mice were destroyed. (See "Jesse's Natural History.") The writer had a very fine crop of strawberries last year, but the mice devoured and destroyed ninety-nine out of a hundred. Almost everything in the garden was more or less injured. By the next fruit season I do not expect to have a mouse left, as I have ten jars in constant use.

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

THE fine weather of May would allow for the planting out in beds, &c., half-hardy as well as the tender annuals, Heliotropes, Pelargoniums, Verbenas, Petunias, Celsias, Zinnias, Stocks, &c., but any omissions should be attended to at once.

We have frequently called the attention of our young readers to the desirability of paying strict attention to the judicious arrangements of flowering plants, as regards height and harmony of colouring. It is true that of late years this subject has become a matter of study amongst gardeners, and great changes for the better have taken place in this respect; still we are far from supposing that we have arrived at perfection. Always bear in mind—if beauty, order, and effect are desired—that attention to this, next to a well laid-out flower garden, is essential to their full development. In producing well-arranged contrasts, the different shades of colour must be as distinct from each other as possible; for instance, white should never be placed in contact with yellow, or deep blue with crimson; but white forms a good contrast with blue or red, blue to orange, yellow to purple or violet, dark crimson to light blue, and scarlet should be placed near those which have a profuse green foliage, as red and green form the best contrast.

The only attention now required with such is to water freely, being careful it does not pass off, tie up, &c. Pinks and Carnations will require due care in securing, and by the middle of the month pipings of Pinks may be taken off, and towards the end layers of some early Carnations be made. Thin away extra flower buds. Dahlias will require securing, and thin out the shoots, so as only to retain about four or five. Stop the leading stem, to give support to the side ones. Cuttings will soon strike root. If the weather be dry, water duly, a good supply at once; a portion of mulchy manure, spread over the roots, is very beneficial. Seeds of Sweet Williams, Canterbury Bells, Scabious, &c., should now be sown for next year's blooming. Auricula and Polyanthus must be kept in a shady, but airy place. Chrysanthemums: young plants should be prepared for the autumn.

IN THE GREENHOUSE, STOVE, &c.

The greenhouse plants which are placed out of doors will require to be duly watered, for if allowed to flag the result is the leaves are damaged. Moss sprinkled between the pots keep the soil cool.

The house will now have to be kept gay and sweet by Balsams, Globe Amaranthus, Coxcomb, Brachycoma, Mignonette Trees, &c. Re-pot as required, in order to keep the plants in a growing state.

Achimenes brought forward in the stove will now be coming into bloom; they repay for every attention. Cuttings of nearly all greenhouse plants should now be put off; May and June are the best months for that purpose. Cinerarias are highly ornamental, and well worth encouraging. Cuttings of Roses may be put in, and will soon strike. Camellias that have been forwarded by forcing the shoots and buds should now be placed in a cooler situation, to give vigour to them. When the grass of Ranunculus or Tulips is quite dead, the roots may be taken up.

ON THE CULTURE OF CHINA ROSES.

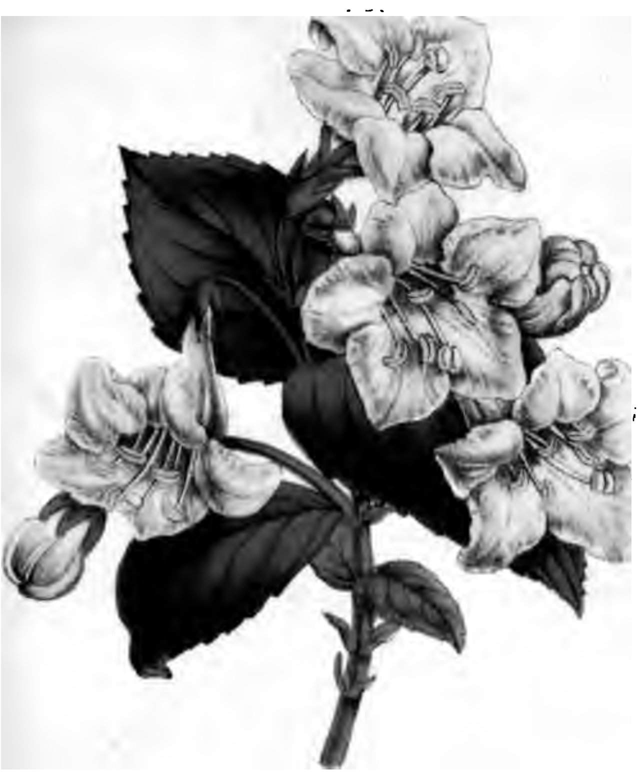
BY ROSA.

In cultivating the Rosa odorota, or Tea-scented Roses, I have practised the following method with great success. Early in January or February, I take some pots of plants into a stove which is heated to 60 or 70 degrees of heat. In the course of a short time, there are some young shoots ready, which, as soon as they have five or six leaves, I take off, and strip some of the under leaves from them, finishing them with a clean cut at a joint. Having prepared the cuttings, I next prepare some 48-sized pots, with two parts fine sand, one part sandy peat, and one part leaf-mould. I then insert several in each pot, and with a fine rose watering pot give them water just sufficient to settle the earth. I then plunge them into a hot-bed frame—or they will strike equally well in the stove, provided they are covered with a small bell glass. After they have taken root, I pot them off into 60's, using at this time sandy loam and leaf-mould. About the middle of May, I turn a quantity out into the beds and borders in the flower garden, where they bloom exceedingly well, and fill the air with that delicious fragrance that is exhaled from them. The remainder I keep in pots, to supply any place that may require them.

PINKS FOR FORCING.

BY A COVENT GARDEN FLORIST.

The Paddington forcing Pink and the Anne Boleyn are the best for forcing that have hitherto been discovered. I raise the pipings early in the season, pot them in four-inch pots, as soon as rooted sufficiently, in rich turfy loam, keeping the pots plunged in coal ashes, in a sheltered, warm situation. By duly attending to them in water, &c., they generally become vigorous, and require re-potting into five or six-inch pots by November, at which time I take a lot in for forcing, and continue through the winter. Plants so treated, plunged into a bark pit, produce twenty-five flowers each. It is usual to prepare the young plants for forcing in the open border, and take them into pots at the end of summer, but they receive a check by removal. I find it to be much better to prepare them in pots, as above described.



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Weigela rosea

FLORICULTURAL CABINET

JULY, 1847.

ILLUSTRATIONS.

WEIGELA ROSEA.

In recent numbers of this Magazine we have figured several beautiful flowering plants which have been introduced into this country by the Horticultural Society from China, being discovered in that country by Mr. Fortune, the Society's collector. The one we figure in our present Number is another of the valuable plants he transmitted to the collection at the Society's garden at Chiswick. It proves to be a neat Syringa-like shrub, and a very valuable acquisition, not only when flourishing in the open air of this country, but highly ornamental for the greenhouse and conservatory, by forcing well at an early period of the year, when every flower is hailed with gratification. The particulars of its discovery, character, &c., Mr. Fortune details in the Journal of the Horticultural Society as follows:—

"When I first discovered this beautiful plant it was growing in a mandarin's garden, in the island of Chusan, and literally loaded with its fine rose-coloured flowers, which hung in graceful bunches from the axils of the leaves and the ends of the branches. The garden, which was an excellent specimen of the peculiar style so much admired by the Chinese in the north, was often visited by the officers of the regiments who were quartered at Tinghae, and was generally called the Grotto, on account of the pretty rock-work with which it was ornamented. Every one saw and admired the beautiful Weigela, which was also a great favourite with the old gentleman to whom the place belonged. I immediately marked it as one of the finest plants of Northern China, and determined to send plants of it home in every ship until I should hear of its safe arrival.

"All the gardens of the mandarins in the north of China are small, and as there is only room for a few plants, these are always of the most select and handsome description. Amongst my collections are several other plants which are common in these gardens, all of which are of great beauty and interest. Azaleas, Roses, Moutans, Glycine sinensis alba, Viburnums (more handsome than our common Gueldres rose), and various other free-flowering shrubs, make these gardens extremely gay, particularly during the spring and early summer months.

"Weigela rosea is unknown in the southern provinces of China, and therefore I have every reason to suppose that it will prove hardy, or nearly so, in England; but, if not, it will make a first-rate greenhouse plant, and will take its place by the side of the beautiful Azaleas and Camellias of its own country. I never met with it in a wild state on the Chinese hills, and it is therefore just possible that it may have been originally introduced to China from Japan; this, however, is only conjecture. In the north of China, where the plant is found, the thermometer sometimes sinks within a few degrees of zero, and the country is frequently covered with snow, and yet in these circumstances it sustains no injury.

"As this shrub has been liberally distributed amongst the Fellows of the Horticultural Society, some remarks upon its habits and cultivation will probably be acceptable. It forms a neat middle-sized bush, not unlike a Philadelphus in habit, deciduous in winter, and flowers in the months of April and May. One great recommendation to it is, that it is a plant of the easiest cultivation. Cuttings strike readily any time during the spring or summer months, with ordinary attention; and the plant itself grows well in any common garden soil. It should be grown in this country as it is in China, not tied up in that formal unnatural way in which we frequently see plants which are brought to our exhibitions, but a main stem or two chosen for leaders, which in their turn throw out branches from their sides, and then, when the plant comes into bloom, the branches, which are loaded with beautiful flowers, hang down in graceful and natural festoons. It was a plant of this kind which I have already noticed as growing in the grotto-garden on the island of Chusan; and I doubt not that plants of equal beauty will soon be produced in our gardens in England.

"The possessors of Weigela rosea had better give it some slight protection during the next winter, by keeping it either in a greenhouse or frame until duplicates are made, when these can be planted out in the open air. The main object should be to enable the plant to ripen its wood well, for when this is done it will not only be more hardy, but it will also flower better in the following season. It is, without doubt, one of the finest shrubs which have been introduced to this country of late years."

[It grows freely with us at our nurseries. The flowers are produced in loose clusters of from three to five, at the end of every little side branch. It merits a place wherever it can be grown.—CONDUCTOR.]

NOTES ON NEW OR RARE PLANTS.

ACACIA CELASTRIFOLIA—CELASTRUS-LEAVED.

Leguminosæ. Polygamia Polyandria.

Seeds of this very beautiful species were sent from the Swan River Colony by Mr. Drummond. We saw a plant of it, six feet high, bushy, in most profuse bloom, at the Royal Gardens of Kew, last April. The flowers are produced in large branching panicles, of a pale yellow colour, which are delightfully fragrant, and perfumed the entire house with its Hawthorn scent. It deserves to be grown in every greenhouse or conservatory. It is readily kept dwarf, by pinching off the leads to induce lateral shoots. Figured in *Bot. Mag.*, 4306.

BERBERIS ILICIFOLIA—HOLLY-LEAVED BERBERRY.

Berberideæ. Hexandria Monogynia.

This beautiful and rare species was introduced into this country from Fuegia, from the extreme part of South America, by the officers of the antarctic voyage under Captain Sir James Ross, and it has bloomed, in March last, in the Royal Gardens of Kew. The flowers are borne in subcorymbosa racemes, several inches long. Each blossom is globose, about half an inch across, of a very rich orange golden-yellow. In its native country it grows to a shrub, about eight feet high; the wood being a pretty pale yellow. The berries are of a deep steel-blue colour, of a singular gourd form. It is very likely to prove quite hardy, and, should it turn out so, will be one of the most striking ornaments for the shrubbery.

COLLANIA DULCIS—SWEET COLLANIA.

Amaryllidaceæ. Hexandria Monogynia. (Syn. *Alstræmeria dulcis*).

This very rare plant is said to be a native of Huallay, near Pasco, in Peru, seeds of which were sent to the late Dean of Manchester, with whom it bloomed in 1846. The stems grow about a foot high, erect, each terminating with one or two drooping cylinder-shaped flowers, The tubular portion is about an inch long, and a quarter in diameter, rosy-purple, with a vivid green end. It is very neat and pretty, and well worthy a situation in the greenhouse.

GARDENIA MALLEIFERA—CLAPPER-BEARING.

Rubiaceæ. Pentandria Monogynia.

Mr. Whitfield brought plants of this new Gardenia from Sierra Leone to the gardens at the Earl of Derby's, at Knowsley Park. It is a hothouse shrubby plant, grows rapidly, and loves a high moist temperature. It begins to flower when two or three feet high. The flowers are produced solitary, terminal. Each flower is about six to eight inches long, a creamy white, which changes to tawny. The tube is slender, but the mouth is broad, bell-shaped.

GLOXINIA FYFIANA—MR. FYFE'S GLOXINIA.

A small specimen of this strikingly beautiful plant, which we introduced to notice in our Magazine for March last, was exhibited at the Horticultural Society's show in Chiswick Gardens on the 19th ultimo, and excited general attention by its peculiar novelty and beauty. It fully verified all that has been said in its praise, and will soon occupy a favoured place in all collections.

GLOXINIA HANDLEYANA—MR. HANDLEY'S GLOXINIA.

Amongst the numerous hybrids in this most interesting tribe of plants, which the introduction of G. rosea gave rise to, this variety is one of the most beautiful. We received blooms of it from the correspondent after whom it is named, and distinguished it by a figure in the FLORICULTURAL CABINET for November, 1843. It is greatly admired in the London collections, where it has only recently become known.

HENFREYA SCANDENS. CLIMBING HENFREYA.

Acanthaceæ. Didynamia Angiospermia.

Mr. George Donn discovered this plant in Sierra Leone, where it is stated to be common. A new genus has been formed with it, and it is named in compliment to A. Henfrey, Esq., F.L.S. It is a robust growing plant, but does not appear to possess much of a climbing habit, at least the plant we saw of it in the collection of Mr. Glendinning, did not, at that time, May 20th, 1847. It is a vigorous shrubby plant, having a large dark green foliage. The flowers are produced in closeish racemes at the angles of the leaves. The flower is funnel-shaped, with a spreading five-parted limb (mouth), white, with a tinge of yellow. Each blossom is about two inches long and an inch and a-half across the mouth. It is a hothouse plant, requiring a moist temperature of 75° to 80°. It blooms in spring and the early part of summer. Figured in *Bot. Reg.*, 31.

IPOMÆA PULCHELLA—THE HANDSOME.

Convolvulaceæ. Pentandria Monogynia.

Seeds of this handsome Bindweed were sent from Ceylon to Mrs. Sherborne, near Prescott, in Lancashire. It is a climbing plant, with herbaceous angular stems. It blooms very freely, and the flowers a good deal resemble those of Ipomæa Horsfallii, but are larger. Each blossom is about two inches and a-half across, of a dark purple-crimson, with five pink-coloured plaits. It is a very pretty flowering species, well deserving to be grown in every warm greenhouse, conservatory, or stove. Figured in *Bot. Mag.*, 4305.

ONCIDIUM BARKERII—MR. BARKER'S.

Orchideæ. Gynandria Monandria.

Imported from Mexico; and has now bloomed in the Chatsworth collection of stove Orchideæ, besides two or three others. The flowers are produced in curved racemes, each flower being about three inches across. Sepals and petals, yellow and green, with very dark cross-bars, producing a beautiful effect; the lip, a handsome pale yellow. It well deserves to be grown in every collection. Figured in *Pax. Mag. Bot.*

RHODODENDRON ARBOREUM var. PAXTONI.

His Grace the Duke of Devonshire's botanical collector, Mr. Gibson, discovered this very magnificent Rhododendron growing in elevated situations on the Khoseea Hills, in the East Indies, where it formed a spreading tree of great beauty. It has bloomed profusely in the greenhouse at Chatsworth. The flowers are produced in large terminal heads, each blossom being near three inches across, of a dark scarlet colour, spotted with black dots round the centre. It is a superb variety, and deserves to be in every collection of this very fine genus. Figured in *Pax. Mag. Bot.*

SALVIA DULCIS—SWEET SAGE.

We have had this very pretty species in bloom. The flowers are dark rose-coloured, and produced with much freedom. It will succeed well in the summer border, with ordinary care.

SOLANUM JASMINOIDES—JASMINE-LEAVED.

Solanaceæ. Pentandria Monogynia.

It is considered to be a native of South America. It is perfectly hardy, flourishing against a wall in the garden of the Horticultural Society at Chiswick. It is a climber, and produces a profusion of neat white flowers in panicles. Each blossom is about three quarters of an inch across. Figured in *Bot. Reg.*

THIBAUDIA PULCHERRIMA—THE BEAUTIFUL.

Vacciniaceæ. Decandria Monogynia.

It is a native of the north of India, in the district of Khasiya. It is a lofty shrub, with long vigorous branches. The leaves are about eight inches long, broadly-lance-shaped. The flowers are produced on the older (not less than two years old) wood, from the axils of the fallen leaves, in shortish umbels of numerous blossoms in each, and the flowers of the same umbel being in all states of progress, from the early buds to the fully expanded; they are of a scarlet colour, variegated with pale green at first, afterwards red veined and chequered (something like the common Fritillaria), with richer coloured lines. It has bloomed finely in the collection of Messrs. Lucombe, Pince, and Co. It is a profuse bloomer, and a most interesting plant. It grows against the wall in a Camellia house.

TROPÆOLUM SPECIOSUM—SHOWY INDIAN CRESS.

Tropæolaceæ. Octandria Monogynia.

From Patagonia, and is, perhaps, the most splendid species of this showy tribe yet received. With the habit of T. pentaphyllum, it produces flowers equal in size to T. Lobbianum, and of the finest crimson-scarlet colour. It was shown by Messrs. Veitch and Son, of Exeter, at the Chiswick exhibition last month.

VANDA VIOLACEA—VIOLET COLOURED.

Orchidaceæ. Gynandria Monandria.

Mr. Cumming discovered it in Manilla, in the East Indies. The flowers are produced in short drooping racemes, the ground colour being an ivory-white, spotted with light violet, the lip being entirely a violet colour. A single blossom is nearly one inch across. It has bloomed at Messrs. Loddiges'.

NEW PLANTS NOTICED IN NURSERIES, &c.

Dendrobium (new species).—Exhibited at the Chiswick show by Messrs. Veitch. The flowers are produced in erect racemes, (of ten or more), yellow, with a spot of deep crimson in the throat of the lip, which is fringed at the edges. No. 2 is yellow, with the labellum fringed. No. 3 has flowers of a delicate rose colour, having a large blotch of bright yellow in the lip.

Azalea, variety, Fielder's White.—This variety is very beautiful, the flowers are a pure white, with green spots on the upper petals, very large, and fine shaped.

Viburnam (new hardy shrubby species).—No. 1 has been blooming in the Horticultural Society's garden at Chiswick. The flowers are produced in large heads similar to the Hydrangea, and of a pure white. Each blossom is an inch across. No. 2 produces its flowers in heads about four inches across, pure white. Each blossom is about half an inch across and semi-double.

Rhododendron metropolitana.—This is a noble flowering hardy variety; the flowers are a deep rose colour, handsomely spotted; they are produced in large heads of twenty or more. A separate blossom is four inches across.

Rhododendron fastuosum, flora plena—The flowers are very large, each being near four inches across, and a very pretty lilac colour, and is what are denominated double, the pistil and stamens becoming petal-like. A very handsome variety.

Rhododendron mutabilis.—When the flowers of this variety are in bud, they are of a bright crimson, then changes to a rosy carmine, and finally becomes nearly white; so that the different shades, appearing at the same time over the entire plant, produce a very interesting appearance. It is quite hardy. The above sorts may be had at the nurseries around London.

Achimenes cupreata.—The flowers are not large, but of a beautiful scarlet, with a yellow throat. The plant appears to be a creeper, hanging over the sides of the pot two feet. It is a singular, pretty species.

Forsythea viridissima.—This is one of the valuable plants which Mr. Fortune discovered in China, and sent to the Horticultural Society's Garden. It is a deciduous shrub, growing nine feet high, in the north of China. It has flowered in the Society's garden at Chiswick, and proves to be of superior beauty. The flowers appear before the foliage is fully unfolded; they are of a rich golden-yellow colour, and the plant is loaded with them, being highly ornamental. It was found growing in a garden at Chusan, along with the beautiful Weigelia rosea. It also grows wild on the mountains. It is a free grower, and readily increases by cuttings or layers.

Spirea pubescens.—A small neat shrub, growing two feet high, which appears to be hardy: it flourished, and bloomed beautifully with us, in a greenhouse. The flowers are produced in smallish umbels, a pure white, and give a very pretty effect; they are fragrant, too. It is very handsome, and well deserves to be cultivated. Plants may now be obtained cheap in the principal nurseries.

Cerasus japonica, flora plena.—The flowers are like those of the double dwarf Chinese Cherry, excepting that they are of a pure white, and perfectly double. It was introduced to the Horticultural Society's garden. It is quite hardy, and deserves to be in every shrubbery.

Weigelia rosea.—This most charming plant has proved to be perfectly hardy, enduring the past severe winter in the open air without injury, and is now growing luxuriantly. It will be one of the greatest favourities.

ON EXPOSING GREENHOUSE PLANTS IN SUMMER.

It is a common practice all over the country to set greenhouse plants, heaths, &c., out of doors during the summer months, without any protection whatever, either to the tops or bottoms of the plants, under the vain impression that the plants will be benefited by such treatment. Plants, when fully exposed to the sun and air, after a time become so dry as to nearly make it impossible to render them moist again; hence the scorched and stinted-looking plants which may be seen in summer. The pots of plants should always be moist. Persons with common observation will have noticed that all the youngest and most tender roots of plants always extend next to the pot; consequently they are the most liable to injury from any sudden check, occasioned by the sun drawing all the moisture out of the pot, and, therefore, out of the soil also. It is no uncommon thing to see the soil quite dried away from the pot, and when the water is supplied, it sinks down the outside of the soil as fast as it can be poured in, and the soil inside is not wetted in the least. How can any person expect plants to grow by such unnatural treatment? Besides, it is a great waste of time to be so frequently watering, as is very often the case; the whole morning and evening are often spent in this way. If plants must be turned out of doors, they ought always to be plunged in some porous substance; although, at the same time, it ought to be something that will hold moisture; for instance, very rough peat, moss, or sawdust. I have seen sand used by some, but I consider it holds the wet too much, which is an evil almost as bad as the former. The pots should always be placed on slates, or some other material that will prevent the worms from entering, as they are great pests if once allowed to enter. They should also be shaded from the sun with some light material, and protected from heavy rains. By following the above plan, a great deal of time will be saved in watering; and the plants, having a more natural treatment, will present a more natural appearance.

BRITISH PLANTS.

WITH OBSERVATIONS ON THEIR CULTURE.

(*Continued from page* 57.)

In a late number we wrote on this subject, and now venture to bring before the notice of our readers a few more of the humble and unassuming beauties which, unheeded by the florist, deck the shady dells, the dreary moors, and the rich meads of our native land. In our last article on the subject, we stated our intentions in regard to the *kinds* of plants we intended treating of; and, although in the following notes we may pass over many British species of great beauty and interest, we beg that the reader will not interpret our doing so as consequent upon a want of our due appreciation of the beauty and the interest of such: to us every floral gem teems with interest; alike the little Gowan and the gaudy Sunflower,—and when Wordsworth says,—

> "To me the meanest flower that blows can give
> Thoughts that do often lie too deep for tears."

he expresses what we have likewise often felt; and what is felt by every true lover of nature.—

> "Where pleasures are in wild fields gathered."

Many of our most interesting wild flowers are altogether unsuitable for garden culture. As an example we may cite the beautiful **Menyanthes trifoliata** (*Buck Bean*), which from its natural habitat being marshes and the margin of peat bogs, or in very wet boggy ground, is quite incapable of cultivation. Yet it is a very lovely flower, and calls the following remark from a botanical writer of the last century: "The flowers of this plant are so extremely beautiful, that nothing but its native soil could exclude it from a place in every garden." (The Rev. John Lightfoot in his "Flora Scotica," Second Edition, vol. i., page 138. Published in 1792.) We beg the reader then to bear in mind, while perusing our series on the subject, that such plants as the Menyanthes do not lie within our province. Horticultural science has of late years done much in the way of showing us how to grow plants, and how to grow plants *well*, that our forefathers could not grow at all; but yet there are many beauties that our gardens have wooed, and will woo, in vain; beauties that love better the marsh and the mountain than the princely parterre. We proceed with our subject.

Dianthus deltoides, or *Maiden Pink.* The florist is already much indebted to the genus Dianthus; but he has not yet drawn upon it to the full extent. The Carnation, the Piccotee, the Pink and the Sweet William, are all snatches from this beautiful family, and have been known in our gardens for a long period of years. Two of the species are alluded to in the following lines of Spenser:—

> "Bring hether the *Pincke* and purple Cüllambine, with gelliflowres;
> Bring *Coronations*, and Sops in wine, worn of paramours."

And it is no wonder indeed that they have been long cultivated for their beauty, for they are beautiful indeed:—

> "*Carnationed* like a sleeping infant's cheek."

What simile more beautiful than this. However although her sisters have long reaped garden honours; although they have charmed royal eyes, and been year after year crowned with green laurels, yet the lowly and lovely virgin we introduce to the reader's notice, still dwells unheeded in her own wild rocky home, known only to the wild bee, that wooes her for the nectar of her rosy lips, and to the little spider, that on dewy mornings decks her with its delicately beautiful gossamer. The flowers of the Maiden Pink are exceedingly beautiful; but smaller (as is the whole of the plant) than those of the florist's Pink. However its size might be increased by cultivation, and would undoubtedly be so, were attention paid to it. *D. cæsius* is likewise worthy of the florist's attention; but it is much rarer than D. deltoïdes, and some difficúlty will be experienced in getting plants. We do not recommend D. armeria nor D. prolifer for garden culture, although both are beautiful.

HYPERICUM HUMIFUSUM, or *Trailing St. John's Wort.*

> "Hypericum all bloom, so thick a swarm
> Of flowers, like flies, clothing its slender rods
> That scarce a leaf appears!"

H. calycinum is often cultivated in shrubberies for the sake of its profusion of flowers; but we have not seen any other species under cultivation. The species to which we here draw attention (H. humifusum), is a low trailing plant, and very beautiful; exceedingly well fitted for a herbaceous border. We have most frequently found it in its wild state, in pastures, &c., and it is probable that it will grow without difficulty in the garden. It should have a rather damp soil, and not much sun; at least until it be thoroughly established in the garden, and its *likings* better known than we can as yet know them. It may be here useful to remark that wild plants of all kinds, natives of this country, ought to be planted in a rather moist and shady situation at first, whatever be their natures; as such a situation is favourable to plants gaining strength, and it is likewise generally *safer to err* by giving native plants too much shade and moisture, than to err in giving them too much sunshine and drought; the latter is likely to cut off most plants altogether, while the former can injure them only very immaterially.

HYPERICUM PULCHRUM, or *Small upright St. John's Wort,* is a beautiful neat little plant, and in regard to *habit* is all that could be desired of any plant, as indeed are some other species of the genus. The plant generally grows about a foot, or a little more, high; the stem and branches are slender, very rigid, and quite erect; the flowers form a loose pinnacle on the top; they are of a bright yellow colour, and the anthers, or male organs, inside the flower, are red; and this mixture of yellow and red makes the plant look very showy and beautiful. Before the flowers expand they are tipped with red on the outside of the petals. It is a perennial, and is frequent in dry woods and heaths, &c. It flowers in July, and may then be removed to the garden, retaining all the soil possible. A somewhat dry soil and shady situation are probably best for this species.

HYPERICUM PERFORATUM, or *Common perforated St. John's Wort.* This plant, which has been designated "Balm of the Warrior's wound," in allusion to its healing properties, is generally taller than the preceding species, and it is not less showy on that account. It grows in thickets, and woods, &c., and is abundant in most places where these occur. It is a perennial, and flowers in July, and may, no doubt, be successfully dealt with as we recommend for *H. humifusum*, to which we beg to refer the reader.

PARNASSIA PALUSTRIS, or *Grass of Parnassus*. This is a pretty little perennial plant, with large white flowers that continue to be produced throughout the months of July, August, September, and October. It loves to grow in moist situations, by the margins of lakes and the sea-shore; but notwithstanding this it is probable that it may thrive in the drier soil of a garden. It should, however, have as wet a spot as can be selected, and at the same time be so situated that it may get only the morning sun; for strong noonday or afternoon sun would burn it up. It is really a deserving flower, and ought to be cultivated.

SILENE INFLATA, or *Bladder Campion*; known better in Scotland by the appellation of *Cow-bell*. This is a beautiful common thing, and we fear that its profuseness may be the cause of its having been entirely neglected by the florist. It grows on old walls, loose banks, stony places, in hedges, &c., and is a very lovely as well as a very graceful and showy plant. It is one that will require no great degree of care to cultivate, for it grows well in any soil where its lot may be cast. And we should hope that this circumstance may be an inducement to its cultivation. It will, however, be all the better with kind treatment, coarse soil, and plenty of sun. It will grow well on a bank overhung by trees, that may be too dry and too barren for many other flowers. The *S. maritima of Withering* can scarcely be considered in the light of a distinct species; but only as a well-marked variety; *it* grows on the sea-coasts, and sometimes by " alpine torrents," as we are told by Withering, and it bears the English name of *Sea Campion*, or *Catchfly*. A variety which seems to be somewhat permanent is given in the last edition of Sir W. J. Hooker's "British Flora," as var. " B," with the *varietic* character:—" Calyx, stem and leaves downy." This variety is a rare one; the only stations given by Hooker are, " near Cromer, Norfolk; banks of the Clyde." However we have specimens of the same variety from the Isle of Wight. A variety apparently intermediate betwixt this and the normal form was last summer found by Mr. George Lawson on the banks of the river Eden, in Fifeshire, " with the stem and leaves (on both sides) covered with a rough pubescence, while the peduncle and calyx are perfectly glabrous. All these varieties are botanically interesting, and are well worth cultivating.

SILENE ACAULIS, or *Moss Campion*. A lovely little alpine gem, with beautiful purple flowers; and declared by a very eminent botanical writer to be " one of the greatest ornaments of our alps." It occasionally occurs with pale flowers, and we have this form, gathered on Ben Lawers some years ago by Mr. W. Anderson. Little *clumps* of each variety intermixed in the border with other flowers would look well; but the border would require to be a shady one, and somewhat cool and moist. There can be no fear of its success on the north side of a rockery, and indeed it is quite a nice thing for artificial rockwork. Perhaps it would do well to grow in pots and under the same treatment as the Auricula and Primrose. It is quite dwarf, consequently not very *showy*, but exceedingly beautiful.

RANUNCULUS ALPESTRIS, or *Alpine white Crowfoot.* This beautiful flower, although allowed a place in all our floras of Scotland, yet seems to us to have but a slender claim thereto. True Mr. George Don, of Forfar (a botanist who did much in the way of exploring the northern hills of Scotland), reported that he discovered the plant in several places by alpine rivulets on the Clovas; but then no succeeding wanderer in that district has given his testimony in confirmation, although the plant, *as an extreme rarity*, has been often sought for by many of our best British botanists who have perambulated the Clovas. It is a very beautiful species, and is sometimes cultivated, although certainly much more seldom than its exquisite beauty and its botanical interest demand. It is a perennial, and its flowers (which are white) generally appear in May. The Ranunculus of the florist is somewhat difficult of culture; but this species is by no means particular in regard to soil, situation, or treatment; indeed we have seen it thriving and flowering well on a dry border, exposed to the sun the whole day long; and we have seen it growing equally healthy, and blooming profusely, at the base of a north wall, where it caught only a parting ray of the setting sun. It will grow well under the treatment usually given to herbaceous plants. Care, however, should be taken to disturb the roots as little as possible in the digging of the border in spring time, as it is an early flowering plant; and no plant should be disturbed when forming flower-buds.

COCHLEARIA OFFICINALIS, or *Common Scurvy Grass.* This is a vernal flower, and resembles much in appearance the perennial Candytuft of our gardens. It is an annual, and should be sown in the autumn, so that it may have time to grow, and produce a profusion of blossoms at the proper season. It is of frequent occurrence on rocks and ditch banks, &c., by the sea-coast, and likewise grows on the elevated mountains. The seeds may be gathered plentifully in the summer season in such situations.

CARDAMINE PRATENSIS, *Ladies' Smock* or *Bitter Cress.* This is a very showy plant, bearing blush coloured flowers. It grows in moist ground, by streams, and in meadows, and flowers throughout the "merry month of May." It is sometimes found with double flowers, and this variety is the one more readily to gain the florist's attention. It is a plant by no means particular in regard to soil, and will grow well, with little care, in almost any situation. No doubt, however, it will grow best in moist ground. We have frequently met with this plant bearing very pale blossoms.

HELIANTHEMUM VULGARE (*Synonome*: CISTUS HELIANTHEMUM of Linnæus), or *Common Rock Rose.* A plant well adapted for ornamenting artificial rockwork. It requires a light dry soil, and is of easy cultivation; but should not be transplanted often. Its natural habitat is dry, rocky, and gravelly places; and it is of frequent occurrence in such situations throughout our country.

VIOLA HIRTA, or *Hairy Violet*, occurs in "woods and pastures in England, principally in a chalky or limestone soil." It is rare in Scotland; but is not confined to the neighbourhood of Edinburgh, as stated in Hooker's "British Flora." It is a very showy species, having large blue flowers, and as it blooms in April and May, when cærulean blossoms are "few and far between" in the flower garden, it really would be an useful and interesting acquisition, and it is indeed strange that it has not long ago been introduced to garden culture, the more especially since the Pansy, and the sweet Purple Violet too, have been so successfully cultivated by the florist. They both have well repaid the care bestowed on them, especially the former; and we have no doubt but the Hairy Violet may do the same: it really deserves a place in every garden. It grows well in a warm, somewhat shaded, situation; and as a rockwork ornament it is very beautiful, and grows luxuriantly. Its seed may be gathered in the summer time from the seed-pods that are bent down to the ground and close beside the root of the parent plant, or plants may be safely lifted at almost any season.

LYCHNIS DIOICA. Under the specific name *dioïca* are included the *red* and the *white Campion* of this country, which are respectively the *L. diurna* and *L. vespertina* of Sibthorpe. In the present day they are considered by botanists as merely varieties of one species, although they are certainly well marked varieties. Besides the difference in the colour of the flowers, those of the white variety (*L. vespertina*) are very fragrant in the evening, like the night-blowing stock, while the red variety (*L. diurna*) is quite scentless. Both varieties are very showy, and of easy culture. It may be useful to remark that the red-flowered variety requires a more moist situation than does the other. A variety, with flesh-coloured hermaphrodite flowers, has been found in Forfarshire, by Mr. William Gardiner, and is the var. γ. of Hooker's "Brit. Flora."

SPERGULA NODOSUS, or *Knotted Spurrey*. A lovely little thing well adapted for planting near the base of artificial rockworks and other moist situations. It is a small plant, raising its graceful white flowers only a few inches high on its slender stem; but it is very beautiful, and well deserves cultivation. It is found wild in wet, marshy grounds, and is by no means rare.

GERANIUM SANGUINEUM, or *Bloody Crane's Bill*. This is a very handsome plant, with large showy deep flesh-coloured blossoms, which it produces in profusion throughout the months of June and July; it is undoubtedly the most beautiful species of the genus inhabiting this country. It requires a light dry soil, and plenty of sunshine, although indeed we have seen it growing and flowering well under the shade of trees where few other things would grow. It is a perennial, and the roots may be lifted in March, and removed to the flower-border. It has occurred to us that it would appear particularly well if planted in *masses*; there would be a perfect blaze of beauty. This plant stands drought well, and so does the following species; and on this account they may be suitable for planting in extensive rock-works where tall growing plants are required.

GERANIUM PHÆUM, or *Dusky Crane's-Bill*. A dingy sable looking flower, very different from the last species, and by no means so showy. Its flowers are smaller, and of a purple-black colour; but its leaves are very large and beautiful. There is a variety with white flowers stated in Hooker's "British Flora" to grow at the "Sands of Barrie, near Dundee;" but local botanists have long looked for it there in vain, and we believe there is now no wild station for it in Britain.

We have, however, sometimes met with this variety in gardens, and it contrasts finely with the dusky flowered plant. This species is of very easy cultivation, and its removal to the garden should be effected early in the spring. It grows in woods, by hedges, &c., but is somewhat rare. We have beheld it growing by the tombs in an old churchyard, in a still and lovely shady dell; and really its mourning-like flowers seemed to feel the influence of the solemn and sacred shade of gloom that hung around the scene.

GERANIUM PRATENSE, or *Blue Meadow Crane's Bill.* This is likewise a very handsome species, bearing large bluish-purple flowers. It grows abundantly in moist thickets, and by the margins of streams, and similar situations, and flowers throughout the months of June, July, and August. The fact of its choosing marshy situations as its habitat, points to the propriety of giving the plant plenty of moisture, and likewise shade in the garden. However these are not essential to its cultivation, and we are much inclined to suppose it a plant capable of growing well even in dry soil.

OXALIS ACETOSELLA, or *Common Wood Sorrel.* This sweet little gem is very beautiful indeed. From amongst its neat little pale green drooping leaves, the slender flower-stalk arises, with its little red bracteas about the middle, and the pale red-veined blossom on its summit, bashfully bending its breast to the earth, as if conscious of such a pure, and humble, and fragile thing being too pure, and too humble, and too fragile for the gaze of the proud and unfeeling world. This sweet little thing is of very easy cultivation, and as it rises only a few inches in height is well adapted for planting in the forepart of a border. It loves the shade, and will do well even under the dense foliage of trees. It is abundant in woods, &c., especially where of a heathy nature and thin soil; and it is of very common occurrence in hilly or sub-alpine districts. It begins to blossom in April, and continues in flower some months; and it may with safety be removed at any season. Pea soil will suit it exceedingly well; but it will succeed in common garden earth, and when once planted in a garden it will not be easily exterminated, for it spreads rapidly.

OXYTROPIS URALENSIS (*Synonyme*: ASTRAGALUS URALENSIS, Linn), or *Hairy Mountain Oxytropis.* A very beautiful plant, with bright purple papilionaceous flowers. The white plant is densely covered with silky hairs, especially near the base, and these give it a very beautiful appearance. It ranks among rarities, being only found occasionally on dry mountain pastures, &c. It flowers in June and July; and perhaps it may succeed well under cultivation if planted in a dry border, where it will be shaded from the midday and afternoon sun.

ASTRAGALUS HYPOGLOTTIS, or *Purple Mountain Milk-Vetch.* This is a neat little prostrate plant, which throughout July is wholly covered with blossoms. The flowers are very specious in comparison with the small size of the plant. Naturally it grows in dry sandy and gravelly places, and in such situations it sometimes wholly covers a great extent of ground. In the garden it will grow well in sandy soil in a dry situation, and exposed to the full influence of the sun. A white flowered variety sometimes occurs which is very beautiful, and contrasts well with the purple flowered sort. Plants may be lifted in the spring-time to the garden; but the preferable way is to gather the seeds in the month of September, and sow them in April or May following. It is a perennial, and will of course be a year in flowering under this treatment. However it is better to have good *cultivable* plants, than to have bad ones, even although a season is lost in getting them forward.

VICIA CRACCA, or *Tufted Vetch*, is a showy plant, growing wild in bushy places; and only fitted for a shrubbery, as an ornamental object. Some others of our British Vetches may likewise be used for *trailing* in thick shrubberies, where nature is allowed to have a good deal of her own way.

SPIRÆA FILIPENDULA, or *Common Dropwort*. This is a very beautiful plant, both in regard to foliage and blossom, and it is sometimes cultivated in gardens. It grows in dry and gravelly pastures, &c., but is somewhat rare in Scotland, and flowers throughout July and August. It is a perennial, and has long tuberous roots, which go deeply into the soil. It grows easily in any soil or situation; but prefers a light dry soil, and warm exposure. The flowers are in a sort of panicle, and of a yellowish-white tipped with rose-colour. And the leaves are very neatly cut and serrated, and of a dark healthy green hue.

ALCHEMILLA ALPINA, or *Alpine Lady's Mantle*. As has been remarked by Hooker, this is perhaps one of our most beautiful Scottish plants. It is by no means *showy*; but the beautiful lobed leaves (which are nicely serrated at the extremity) are covered with a silky or silvery down on the back; and this renders the plant a very elegant one. The flowers are small and inconspicuous, although not destitute of lovelines when closely examined. It forms a neat little ornamental plant in the flower border, and has the recommendation of always keeping itself neat even with little help. It forms a fine little clump, and keep always green on the top, although we may find many withered leaves of a beautiful silky brown if we examine near the roots. It should be planted in a dry situation, and in peat earth, as, if planted in common earth, or a wet shaded situation, it loses much of its silvery down, and this is the chief ornament of the plant. We have proved by experiment the powerful influence of soil and situation on the pubescence of the Alchemilla alpina; and as some of our readers may be interested in matters relating to vegetable physiology, it may be proper here to remark that (as a general rule, and with very few exceptions indeed), plants that grow in a dry soil and sunny situation, are *more* pubescent or hairy than plants growing in moist soil and shady situations; and that *aquatic* or water plants are generally entirely void of pubescence. Some plants that grow in dry situations are quite glabrous; but these are exceptions to the general rule. We may perhaps enter upon this interesting subject fully some months hence, if we can find a spare page or two to devote to the matter. It grows abundantly on the lofty mountains of England, Wales, Scotland, and Ireland, and is most frequent on the banks of alpine rivulets. It is beautiful to see a bank sloping gently to a little stream, covered with this most lovely gem of Flora; while the wild and rocky mountains around are empurpled with the bright heather, and made calm and lovely by the first rosy rays of the rising sun. Insects shine above the stream, dew-drops glitter in the herbage, and the soft flower-scented zephyr steals among the leaves of the little alpine flowers, and turns up their clear shining silvery sides to dazzle the eye of the beholder. Scenes of this kind, wooers of nature know, and can fully admire. The ALCHEMILLA is one of the best suited plants for rock-works that we have, and we would warmly recommend it for the ornamenting of such.

POTENTILLA VERNA, or *Spring Cinquefoil.* This is an exceedinly beautiful and showy little plant for its size, and has the additional recommendations to the florist's attention of being of neat habit, a free bloomer, and of very easy cultivation. It is a very dwarf creeping plant, with large and beautiful yellow blossoms, which appear in May, and continue throughout the greater part of the summer. It grows in old dry pastures, and chooses a warm sunny spot wherein to pitch its tent. It will grow well enough in any garden soil, and in any situation; but it should have a dry sunny border, and poor soil, for if planted in rich soil, and in the shade, it grows too luxuriant for flowering profusely. A year or two ago an anonymous correspondent of the "Gardener's Chronicle" recommended this Potentilla as a good plant for edging to flower-garden borders and figures. As seen growing wild it might seem to be well suited for this purpose; but when cultivated it grows much more luxuriant, and spreads too fast by its creeping scions to be available as an edging. However in very poor sandy soils with a warm sunny exposure it may do well enough, if renewed every year, and kept cut well in at the edges by the spade throughout the season. As a rock-plant it is everything that could be wished. It may be removed at any season if carefully treated. Where the soil of the garden is not sandy nor gravelly, abundance of sand should be given at the roots of the plants when planted.

POTENTILLA ANSERINA, *Silver-weed,* or *Sweet Cinquefoil.* The flower of this species resembles the last; but it is a very different plant in habit and general appearance. The leaves are very sickly and large, and the stems are creeping, and creep very extensively, like the strawberry. It is a common plant, growing by waysides abundantly, and in the summer the shoots may sometimes be seen stretching wholly across hard beaten footpaths. It begins to flower in May, and continues throughout the summer; its flowers are large, of a bright yellow, and scent like the Hawthorn. It will grow well in any soil or situation; we find it growing wild and flowering profusely in all sorts of soils and situations; by the dry and hard beaten footpath, along the sunny bank, and in the shaded ditch, where it is associated with the *Horse-tails* and other marsh-loving plants. However it is always most beautiful in a dry, sunny situation; its leaves are neater and more silvery, and its flowers more numerous.

EPILOBIUM HIRSUTUM, or *Great Hairy Willow Herb.* This is a tall growing showy plant, having large rose-coloured blossoms, which appear in July and August. It is a perennial creeping-rooted plant, and grows by the margins of streams, lakes, and ditches, and is frequent throughout Great Britain and Ireland. This plant should be located in a shady situation, and, if possible, in a wet soil. It loves moisture, and may do well at the bottom of a north wall, or behind bushy trees.

Sedum Anglicum, or *English Stone-crop*. A beautiful and showy dwarf plant, suited for the front of a dry border, where it may have the sun from sunrise to sunset all the year through. It is a very little plant, only growing two or three inches in height; its leaves are of a sea-green colour, often tinged with a ruddy hue, and the flowers are white, with purple anthers, are very conspicuous, and seem starlike in appearance. It is an annual, and flowers in June and July. It grows naturally on sandy and rocky places, especially near to the sea; but is not so common in England as it is in Wales, Scotland, and Ireland. The seeds should be gathered in the autumn, and sown in spring in a dry, sunny border; it may do in a shaded situation, but not so well.

Saxifraga oppositifolia, or *Purple Mountain Saxifrage*. This is a very beautiful purple flowered plant, and very different from any other of our British *Saxifrage*. It is deservedly cultivated a good deal in our gardens now, being an early flowerer, and very lovely. When in flower the plant is wholly covered with the lively purple blossoms. It will grow well in a moist, somewhat shaded situation; and plants may be got from a nurseryman. It grows wild on moist alpine rocks, and is most frequent on the Highland mountains of Scotland. It is an excellent rock-work plant.

Saxifraga hypnoides, or *Mossy Saxifrage*, is a beautiful species, frequent in the alpine districts of England, Scotland, and Ireland. It is often cultivated in the flower-garden, and does not seem to require any lengthy notice here.

Linnæa borealis, or *Two-flowered Linnæa*. This is a plant that must be looked upon with pleasure by every lover of Flora, and by every admirer of genius. In the words of Smith, it was this "little northern plant, long overlooked, depressed, abject, flowering early," which Linnæus himself selected as, therefore, most appropriate to transmit his name to posterity. It is a very graceful plant, with lovely drooping flowers of a pale rose-colour, yellowish within; and these are fragrant. It really deserves to be cultivated, certainly not less from its botanical interest and its associations, than from its own intrinsic beauty. It grows in woods, and sometimes in open moist situations in Scotland; but we have only one station for it in England, viz., in a plantation of Scotch firs at Catcherside, in the parish of Hartburn, Northumberland, which is recorded on the authority of Miss Emma Trevelyan. There can be little doubt but it may be cultivated in a somewhat shady situation, if well attended as to watering in dry, sunny weather. Perhaps it would be fully as well if altogether shaded from the strong sun.

Eupatorium cannabinum, or *Common Hemp Agrimony*. This is a very tall plant, growing to the height of several feet; and its flowers appear in dense corymbs which are terminal, or on the top of the plant; they are of a pale reddish-purple colour, and it is in blossom in July and August. It grows by the banks of rivers, &c., and will prefer a moist, shady situation in the garden.

Gnaphalium dioicum, or *Mountain Cudweed*. A beautiful little plant a few inches high. The leaves are white and downy beneath, but green above; the flower-stalk is densely woolly, and the flowers are whitish, often rose-coloured, as we have frequently gathered it in dry, sandy situations. This plant will grow and flower well in a dry border in peaty soil.

CAMPANULA ROTUNDIFOLIA. *Round-leaved Bellflower*, or *Harebell.* This is a beautiful plant, as are all the species of the genus. Its azure bells appear on dry pastures, hedge-banks, and waysides, in the months of July, August, and September; and beautiful is it indeed to see the graceful drooping flowers of this sweet gem trembling in the slight summer breeze that disturbs not the tranquillity of other flowers. This is a very interesting as well as a lovely flower, and especially must it be so to our friends in the northern part of Britain; for what Scotchman, who cares for his country, but must love dearly the "Bluebell of Scotland." The cultivation of this flower is an easy matter, and indeed it will flourish in any soil; but better in a dry situation and compact soil. It is a perennial, and grows about a foot high, generally, although very subject to variation according to situation, soil, and other circumstances.

CAMPANULA LATIFOLIA, or *Giant Bell-flower.* This, characterized by Sir W. Hooker as the "finest and most stately of our species," really deserves a place in the garden. The flowers are very large and blue, and appear at the same time as those of *C. rotundifolia.* In Britain it is not a common plant; but is occasionally found in moist, shady woods in some parts of England, and is by no means rare in similar situations in Scotland. Only one locality is recorded for it in Ireland. It is of a different nature from the last, and will require very different treatment. Naturally loving a moist, shady situation, one of this character should be sought for it in the garden; and if furnished with such we think there can be little fear of its success. Unlike its more humble sister the Harebell, it must have a rich soil; but without fresh dung. Sufficient instructions for cultivating the Pyramidal Bellflower (*Campanula pyramidalis*) have appeared in this and other floricultural works; and may we suggest the propriety of trying the treatment recommended for that species, upon our *C. latifolia.* It is very likely that it may succeed well under it. Under whatever treatment the plant may be submitted it should have rich soil and plenty of water.

CAMPANULA GLOMERATA, or *Clustered Bell-flower.* This is likewise a showy species, varying very much in size, from a very few inches to upwards of a foot in height. It is a perennial, and flowers in July and August, and September. It grows in dry pastures, &c., often near the coast; and will do well in a dry but rich border. To grow to any size, it *must* have such soil. It should have plenty of sunshine.

There are many others of our British Bell-flowers deserving cultivation. C. patula, rapunculus, and hybrida (an annual), will do under the treatment recommended for C. glomerata. Treat the other species the same as C. latifolia. We would particularly direct attention to C. hederacea, which is a most graceful little plant.

CALLUNA VULGARIS, or *Common Ling.* A plant very similar in appearance to the Common Heather, and, as its habitat is on heaths and moory places, it is often confounded with that plant by the unscientific; it is, however, quite distinct in botanical character. It is a very beautiful little shrub, varying in size from a few inches to as many feet, and it produces a profusion of its rosy blossoms throughout the latter part of summer and the autumn months. It will grow well in any situation, and is a capital thing for the front of a neat shrubbery. It likes peat, and a compact soil and shady situation, although it is by no means particular in its choice.

Erica, or *Heath*. There are several distinct species of Heath, natives of this country, and all really deserving of cultivation; but, as the treatment of all the kinds is very similar, we may make one paragraph do for all the species. They should be treated as nearly as possible in the way that Cape Heaths are grown; with this difference, that they require no winter protection. Like them, they should be grown in peat, and they should have abundance of fresh air. Some of the species might be grown in pots, and removed for the ornament of the greenhouse, the conservatory, or the drawing-room, when in flower; they form good plants for this purpose, and grow with very little care or attention. Our British species are:—

> **Erica cinerea**, *Common*, or *Fine-leaved Heath*, which is abundant on heaths and moors.
>
> **Erica Mediterranea**, or *Mediterranean Heath*, which was discovered in Ireland, in 1830, by Mr. M'Kay, in boggy ground.
>
> **Erica carnea**, or *Flesh-coloured Heath*, for which only one locality is recorded, viz., Galway, Ireland, on the authority of Miss Martin.
>
> **Erica tetralix**, or *Cross-leaved Heath*, a species common in boggy heaths.
>
> **Erica vagans**, or *Cornish Heath*, a denizen of Cornwall heaths.
>
> **Erica ciliaris**, or *Fringed Heath*, which grows on boggy heaths in Cornwall.

Menziesia polifolia, or *Irish Menziesia*, is a native of the Green Isle, and a very beautiful little shrub. Its treatment is in every way similar to the Heaths, which *vide*.

Vaccinium vites-idæa, or *Red Whortle Berry*, a very little evergreen shrub, that grows on cold dry heaths; it resembles very much in appearance the garden Box, but, unlike that plant, it produces lovely little flesh-coloured flowers. The plant can scarcely be said to demand a place in the flower border, for its flowers are not very conspicuous; but we introduce it here with the view of suggesting it to some of our readers as a plant well suited for an edging. In the cold region of Norway it is used for this purpose, instead of Box, and would do equally well here, no doubt. How often do we hear complaints about Jack Frost killing the Box edgings yearly in some gardens, and yet we have as good an edging plant growing wild on our own hills in great abundance, that would bid defiance to all the Jack Frosts that were ever borne on Boreas' wings. We hope that some reader, enthusiastic in the cause of our wildlings, may be induced to try the Whortle Berry, on a small scale, as an edging; for we do not feel warranted in recommending a whole garden to be laid out with it in the meantime, lest some fault may lurk in it which we do not know.

Pyrola rotundifolia, or *Round-leaved Winter Green*, is an interesting plant, and beautiful as it is rare. It is of low growth, of very neat habit, and produces its lovely white fragrant flowers in July and August. It is occasionally found wild in moist woods in this country. In the garden it should be grown in a shady situation, and, in regard to soil, we may remark that it cannot be given an over-rich soil. The following compost may be likely to do well with it. Thoroughly rotted leaf mould two-sixths, peat earth two-sixths, old cow-dung one-sixth, and not over-coarse river sand one-sixth. This plant would succeed well in a cool Auricula frame, and treated in the same way as Auriculas generally are; and indeed its beauty will be greatly enhanced by pot culture. It should be particularly well drained when grown in pots, but kept always somewhat moist, and much in the shade. The other British species of this genus are all very lovely, and worthy of cultivation, and may be cultivated in the same manner as we recommend for the present species; we will not therefore repeat the mode of treatment, but content ourselves with noticing them shortly, as follows:—

> PYROLA MEDIA, or *Intermediate Winter Green*, flowers in July and August, grows in woods, but is more common in Scotland than in England or Ireland.
>
> PYROLA MINOR, or *Lesser Winter Green*, flowers at the same season as *P. media*, and grows in woods, &c., in the north of England and Scotland, common.
>
> PYROLA SECUNDA, or *Serrate Winter Green*, flowers in July and August; is not common, but of occasional occurrence in fir woods, &c., in Scotland.
>
> PYROLA UNIFLORA, or *One-flowered Winter Green*, flowers in July; grows in woods in Scotland; but rare. It is a small, but very beautiful species, bearing one large white fragrant flower on the top of its little stalk.

CICENDIA FILIFORMIS, or *Least Gentianella*. A very graceful little plant, with yellow flowers. It grows in sandy turf bogs in the south and south-west of England, and in some places in Ireland. It is an annual, and the seeds should be sown in April, in moist peaty soil and shady situation, and the flowers will appear in July. This plant might do better in a cool frame, and kept well watered, than in the open border.

GENTIANA PNEUMONANTHE, or *Marsh Gentian*. A perennial plant, growing in moist heathy places in several parts of England, and bearing large blue flowers, very similar to those of our common cultivated Gentian. It flowers in August and September, and, if removed to the garden in the spring or early part of summer, will blossom the same season. It requires a moist peaty soil, and plenty of sunshine. It should be well attended as to watering in dry weather.

GENTIANA AMARELLA, or *Small-flowered Autumnal Gentian*. A very showy annual, which grows abundantly in Scotland, flowering from April to near the end of autumn. It likes a rich soil, and should be sown in the autumn. A rather dry situation should be chosen, but, by all means, let the soil be rich.

GENTIANA CAMPESTRIS, or *Field Gentian*. An exceedingly beautiful little plant, likewise an annual, and flowering from July to October. It is smaller than the last, but not less showy. Sow the seeds in dry sandy soil, and warm exposure, in the spring; say April, or beginning of May, and it will succeed well. It is somewhat remarkable that foreign annuals are so much run upon, when many of our own wild annuals, of exquisite beauty, are unheeded. But the tastes of florists may change in this matter, as they have often done before in others.

CHLORA PERFOLIATA, or *Perfoliate Yellow Wort.* This is likewise a lovely annual, growing in dry and gravelly places, chiefly in the middle and southern parts of England, and about Dublin, in Ireland; it bears bright yellow flowers in profusion throughout the months of July, August, and September. Sow the seeds about the end of April in a dry warm border, inclining to sandy, and not very rich. By no means allow manure, but what is perfectly decomposed, to come near it.

VILLARSIA NYMPHÆOIDES, or *Nymphæa-like Villarsia.* "A beautiful plant, easy of cultivation, and difficult to be eradicated."—*Hooker.* It is a perennial, and has large yellow flowers, that are produced in July and August. It will prefer a wet situation; but the cultivator need not be particular about soil. It is rare in this country, but is occasionally met with in still, and slow running waters.

CONVOLVULUS SEPIUM, or *Great Bindweed.* This large white-flowered Convolvulus grows in moist woods and hedges, and flowers in July and August. It is a perennial, and of easy culture. Being a climbing plant, it requires to be provided with supports, in the shape of sticks, or, what is better, the branch of a tree.

ECHIUM VULGARE, or *Common Viper's Bugloss.* An exceedingly showy and beautiful plant, well adapted for a herbaceous border. The flower, before opening, is of a rich purple, and, when open, of a bright and beautiful blue. The plant grows from two to three feet high, and the dense spike of brilliant blossoms often measures two feet in length. It is a perennial, and grows on dry gravelly banks, old walls, &c. When cultivated, it should have a very dry border, and not very rich soil. *Echium violaceum* is known to florists already, and does not seem to require remarks here, but its very fine spikes of rich blue flowers renders it deserving a place in every flower garden.

MYOSOTIS ALPESTRIS. *Rock Scorpion Grass*, or *Alpine Forget-me-not.* A lovely alpine gem; even seeming to equal in beauty, although certainly not in sentimentality, that dear and sacred emblem of friendship, the true Forget-me-not. It is a perennial, grows on the highland mountains at a great elevation, and there flowers in July and August, although it is probable that it will flower some months earlier, under cultivation, in our warm gardens. It should be planted in a cool shady situation, and so that it may not have more than an hour's sun throughout the whole day.

SOLANUM DULCAMARA. *Woody Nightshade*, or *Bitter Sweet.* A lovely, though poisonous plant, bearing purple flowers, with yellow anthers, which appear in June, July, and August. It is of easy cultivation, but prefers moisture, and a somewhat rich soil.

VERONICA CHAMÆDRYS, or *Germander Speedwell*, has bright blue flowers, "greeting us at an early season of the year, and hence rendering the plant a general favourite." It is a perennial, and flowers throughout May and June, and grows abundantly on hedge-banks and by waysides. Little clumps of this in the herbaceous border will look beautiful. Plant it in pretty strong, not sandy soil. Beds of it have been recommended as very ornamental, and no doubt they would be so. It is of very easy cultivation, requiring no peculiar treatment.

Euphrasia officinalis, or *Common Eye-bright.* A lovely annual, abundant in moory and heathy places, and producing a profusion of showy blossoms, white, streaked with purple. It flowers in July, and should be sown in early spring in peaty soil. Milton celebrates this plant as that employed by the archangel Michael to remove the film from the eyes of our first parent, which was caused by his eating of the forbidden fruit. These are Milton's words:—

> "Then purged with *Euphrasy* and Rue
> The visual nerve, for he had much to see."

It is, even in the present day, much used by country people in diseases of the eye.

Rhinanthus crista-galli, or *Common Yellow Rattle.* A very showy tall growing plant, abundant in pastures, by road-sides, old walls, and other situations. It is an annual, and flowers in June. The seeds should be sown early in spring, and perhaps would be better if sown in the autumn. Indifferent soil will suit this plant; but give it a somewhat dry situation.

Melampyrum arvense, or *Purple Cow-wheat.* This is a very handsome plant, the flowers being of bright and varied colours; yellow, purple, rose colour, and green, all in the same flower. It is an annual, flowering in July, and really deserves cultivation. Sow the seeds towards the end of April. Give it a dry sandy border, with a warm exposure. It is not a common plant in Britain, and grows principally in corn-fields, and dry gravelly places in Norfolk and about Norwich.

Digitalis purpurea, or *Purple Foxglove*, is a very handsome flower; indeed, "the most stately and beautiful of our herbaceous plants." Throughout the months of June and July it produces its long and stately spikes of dropping purple (more rarely white) flowers. The white variety is not of unusual occurrence in gardens, and the purple one is beginning to be cultivated a good deal. It is common in dry hilly places, but "almost unknown in the more eastern parts of England, such as Norfolk and Suffolk."

Linaria cymbalaria, or *Ivy-leaved Toad Flax.* This is commonly cultivated in gardens; but is more suitable for rockworks than for the herbaceous border. It is of very easy cultivation, and is in some gardens a troublesome weed. The fine spikes of yellow flowers are very handsome.

Verbascum thapsus, or *Great Mullein.* A very tall-growing handsome biennial, flowering in July and August. It is frequent on dry gravelly banks and old walls, &c. The flowers are produced in a long spike, four or five, sometimes six feet high, and are of a golden yellow colour. This plant should be treated in every way similar to the Hollyhock, and it will succeed well. It is by no means difficult of culture; much easier than the Hollyhock itself, and it will indeed grow with no care at all, and seed itself, if planted in a shrubbery where the soil is not often disturbed. Its large size, and showy spike of flowers, are particular recommendations for its being introduced to the shrubbery, and its easy culture is likewise favourable. Sow the seeds in April, transplant when the plants come to a proper size, and, early in autumn, plant them in the place where they are to flower the following summer.

SALVIA VERBENACA, or *Wild English Clary*, or *Sage*. A rather showy plant, which grows well in the garden border, especially if in a dry warm exposure. When cultivated, the flower spike becomes more lax than when in the wild state, which does not lessen its show. A year or two ago, a Dundee correspondent of the "Gardeners' Chronicle" recommended an attempt to hybridize this plant with the pollen of the larger flowered Salvia patens, or Salvia fulgens, and thus to procure a very showy, and, at the same time, hardy kind. This may perhaps be tried by some of our readers who delight in hybridizing. The *S. Verbenaca* is very easily cultivated, and not unfrequent in dry pastures, &c., in England, but is more rare in Scotland.

AJUGA PYRAMIDALIS, or *Pyramidal Bugle*. A very beautiful little alpine flower. It occasionally finds a place in the herbaceous border, but deserves more extensive cultivation. It is a perennial, flowers in June, and loves a shady situation, with good soil, having an admixture of peat.

GALEOPSIS VERSICOLOR, or *Large-flowered Hemp Nettle*. This is a very showy annual, with large yellow and purple flowers, of frequent occurrence in dry gravelly places in Scotland, but rarer in England. Its flowers are produced in July and August. It is of easy cultivation, if a dry sandy border and sunny situation is secured for it. Sow the seeds in April, or early in May. The soil need not be of a rich nature.

GLECHOMA HEDERACEA, or *Ground Ivy*. A perennial, having very showy blue flowers, which appear early in the season at the foot of hedges, and in waste bushy places, &c. It is very beautiful, and its early flowering claims for it a title to a place in the garden border. It is of easy cultivation, and prefers a light dry soil. It is a good rock-work plant, and will grow well at the root of a garden hedge, where other things would pine and die; and here it may be planted with advantage.

PRIMULA SCOTICA, or *Scottish Primrose*. This is a sweet little gem, having deep bluish-purple flowers, with a yellow eye, and, we believe, it is a plant peculiar to the north of Scotland; thus remarkably limited in its geographical distribution. It deserves cultivation, and perhaps will be best cultivated in a cool frame. It should have a sandy soil, with, perhaps, a slight mixture of peat, and be well attended in regard to watering and fresh air, both summer and winter. The other British species of Primula—P. veris, P. vulgaris, P. ælatior, and P. farinosa—are all common in gardens, and do not require our attention in the present notes.

ARMERIA MARITIMA, or *Sea-side Thrift*. This herbaceous plant is sometimes cultivated, and most frequently used as an edging. It is of easy culture, and is found wild on rocky sea-shores, and the summits of our highest mountains, showing strikingly the similarity in character of the marine and the mountain breeze. It flowers in July and August. The flowers are generally rose-coloured; but the Rev. Gerard E. Smith finds a white-flowered variety in Cornwall. This variety is likewise sometimes cultivated in gardens, although more rare than the rose-coloured one.

POLYGONUM BISTORTA. *Bistort*, or *Snakeweed*. A rather showy plant, bearing a cylindrical spike of flesh-coloured flowers, which appear in June and July. It is easily cultivated, and likes a rich moist soil, and shady situation; it is a perennial.

POLYGONUM AMPHIBIAM, or *Amphibious Persicaria*. This is perhaps more handsome, although more common than the preceding species; the flowers of this are of a bright rose-colour, and the plant is altogether of a more stout make, and more showy. It is frequent in moist ground, and by river sides, &c., and flowers in July and August. It is a perennial, and may be cultivated with little care in a damp, shady border; the kind of soil is a matter of very little importance with this plant; but give it abundance of water in dry weather; keep the earth around it always as moist as possible.

DAPHNE LAUREOLA, or *Spurge Laurel*. This is a very fine evergreen shrub, which grows in woods and thickets, &c., throughout England; but is not so common in Scotland. It deserves a place in the shrubbery, and will grow well under trees where many other shrubs would not.

JUNIPERUS COMMUNIS, or *Common Juniper*. This is likewise a beautiful shrub, growing in woods and heaths; but most frequent in Scotland. It is very variable in size; but grows to a good height when cultivated. It is of easy culture.

ALLIUM URSINUM. *Broad leaved Garlic*, or *Ramsons*. This is a very showy species; bearing umbels of large white flowers, which appear in moist woods and on shady banks in July. It has a strong scent like that of garden onions (which indeed is common to all the species of the genus, of which it is one), and this militates against its claims to a place in the flower-garden, for the exhalation of such a powerful odour prevents the enjoyment of the sweeter scent of other flowers. It is useful, however, for planting under trees or bushes where other things would not do, for it thrives remarkably well in such situations. It likes plenty of moisture.

HYACINTHUS NON-SCRIPTUS. *Wild Hyacinth or Blue-bell*. This sweet gem of the woodland surely has claims to be ranked as an ornamental plant, for in gracefulness and beauty, and showiness, it is behind few. Its drooping flowers appear in May. It is a bulbous-rooted plant, and will do best in a shady situation; the roots should not be lifted, except when this is rendered necessary by their being too much overgrown. Lifting, when done, should be done in August or early in September.

ORCHIS MASCULA, or *Early Purple Orchis*. For remarks on the cultivation of this and the other British species of Orchis, we beg to refer the reader to the interesting paper by Mr. Johnston, already published in the "FLORICULTURAL CABINET." To Mr. Johnston's remarks we will only add that many of the species are really deserving of cultivation.

IRIS PSEUD-ACORUS. *Yellow Water Iris*, or *Corn Flag*. A very showy plant, flowering in June and July, and growing in moist places, by streams, &c. It is easily cultivated, and should have a moist, shady situation, and somewhat rich soil.

CYPRIPEDIUM CALCEOLUS, or *Venus' Slipper*, has already been noticed in Mr. Johnston's paper, if we recollect rightly. It deserves cultivation, and is "one of the most beautiful and interesting of our native plants."

In bringing to a close our Notes on British Flowers for the present Number, we hope that what we have written on them has not been in vain. We love wild flowers dearly; we have spent many of the happiest days of our youth in searching for them in some of the loveliest scenes of nature; and it has often been matter of regret to us that the many sweet gems which are scattered o'er the hills and in the vales, remain beyond the reach of the eyes of the bulk of mankind. Our wild flowers are associated with the sweetest days of our childhood, and our happy school-days too; they are associated with the most beautiful scenes of our country; and their praises have been sung by all our country's poets; and why is it that they are not brought to the city garden, to gladden the hearts of the man of business and he who cannot wander in the green fields. Many are they who seek a remission from care and anxiety, and bustle, in the calm and pleasingly silent retreat of a flower-garden; yet is it not strange that the very flowers that are best fitted to engage the mind, and leading it into a pleasant mood, are utterly neglected. Wildlings have a power over the heart and the mind that strange and foreign flowers do not have. The sight of a pale Primrose carries one to the green fields in an instant; and in imagination he sees the fresh banks bespeckled with the bright blossoms of the sweet gem; and he treads over again the little flowery paths which he used to tread in childhood; he gathers the same Primroses from the same banks, with the same light joyous heart, and for a time he is led to forget the world and its many cares, its gold and its gloom; and to think of higher and holier things. Such is the effect of our country's flowers; and, reader, if you do love nature, say if it is not true what we assert.

In these Notes on British Plants which we have published, it may be observed that many sweet things well adapted for rock-work ornament, and ponds, &c., are not treated of. We reserve these for future Numbers, and will take the first opportunity of writing on rock-works and rock-plants, and we will then notice all such, as likewise those of other countries. Nor have we meddled with the grasses, Ferns, Lycopods, nor mosses, in the present series. These we likewise reserve for the future.

We ardently hope that what we have written may bring many of our wildlings a step nearer our homes, and that the attention of our readers may be employed at the present delightful period of the year, in collecting such plants as may suit their taste and localities, we have inserted these extended remarks in our present Number.

INCREASING EXOTIC PLANTS FROM CUTTINGS.

BY A GERMAN PROPAGATOR IN A LONDON NURSERY.

My employment from twelve years of age to thirty has been solely in propagating plants in my own country, Belgium, and England. My practice being thus extensive, I take credit for possessing some abilities in the science. This induces me to forward for insertion in the Cabinet some details of my treatment, &c., and for the present Number some remarks on increasing by cuttings shall suffice.

THE STRIKING OF PLANTS BY CUTTINGS.

When I obtain cuttings at a distance, I find it in most cases essential to success to have the ends which have been cut dipped in puddle, or stuck into a portion of clay, for the crude sap in the cutting is not raised by endosmose but by the process of evaporation; care is therefore taken that the surface of the cut does not become dry before being put in the earth, and air get into the lower end of the vessels, for as soon as this takes place only very strong shoots are capable of drawing up moisture, as has been proved by the experiments of various philosophers. The cuttings are therefore stuck in wet sand, clay, &c., if they cannot immediately be put where they are intended to remain, although it is better to avoid this. If, however, they are such as ought to lie a day or two, in order to insure success, as some acacias, &c., it is in a damp place; and the precaution is taken, if possible, to cut them again before planting. If the long-leaved kinds be stuck in the earth immediately after being taken from the parent plant, the inner bark will become black in from fourteen days to four weeks, and the cutting will perish.

This phenomenon appears to be in close connexion with the form of the leaves of these plants, as those of the acacias have very small stomata. In their stead, on the under side of the leaves of the latter plants, are small dimples, lined with short hairs, which the Diosmas possess. Now, as the crude nourishing matter is drawn up through the open wood in its existing state, and received by the cutting, while the spongioles of the roots only imbibe it in a very thin solution, it appears that the above-named plants, on account of the peculiar formation of their leaves, cannot elaborate in any great quantity this gross nourishing matter; and hence arise stagnation of the juices, and the before-mentioned appearances. The good effect of leaving these cuttings lying, and thus interrupting the growing process, and preventing the superabundant rise of the crude nourishing matter, will be apparent; and this is the more probable, as it is usual, for the same reason, to put a piece of mould round the cut.

Cuttings of succulent or fleshy plants also lie for a time before planting, and on no account in a moist atmosphere, that the surface of the cut may be sufficiently dried. They retain so many watery particles in their cellular tissue that, when this is neglected, the face of the cut soon rots. The species of the families Melocactus, Echinocactus, Mammillaria, Opuntia, Cereus, &c., have an extremely thick bark, and a firm epidermis with very few stomata; on which account the process of evaporation is so slow that they remain alive for a long time without receiving external nourishment. The dried cuttings of these plants, therefore, are generally planted in dry earth, and set in a bed or house filled with warm air, and are not watered till they have formed roots from the nourishing matter accumulated in themselves. The roots can scarcely ever penetrate the thick bark, and are produced between the wood and the bark. In some of the Opuntia and Cereus species, however, they come out of the bark at the side. The other succulent and fleshy plants which form side roots, such as the Aloe, Haworthia, Sempervivum, Mesembryanthemum, Crassula, Plumieria, and its congeners, as well as all the Cacti, are watered as soon as they are planted. Lastly, plants with milky juice also require similar treatment, as they are equally liable to damp off.

As soon as a part of one of these plants is cut off, the milky juice exudes in great quantities, covers the whole surface of the cut, and hardens like caoutchouc, by which the vessels are all stopped up, and the ascension of the moisture prevented. Cuttings of Ficus, and the dry roots of Euphorbia, are put in water, where they remain twenty-four hours before they are put in the earth. The same end is also attained when they are put in dry sand immediately after being cut, and afterwards the sand and the milky juice cleared away. Only the succulent and very milky Euphorbias must lie for some time.

Although it is proved by the above that the cutting receives as much moisture through the face of the cut as it loses in ordinary circumstances by evaporation, yet no sooner is it placed in very dry air, or in a draught, or exposed to the sun's rays, than a disproportion takes place between them. When this is the case, more watery particles are lost through evaporation than are raised in the body of the wood, which is very easily perceived in fleshy-leaved plants. On this account, hot-beds and houses prepared on purpose for propagating are used, in which the outer air is excluded, a moist temperature maintained, and, in very warm sunshine, a dense shade is given. Bell-glasses are placed over the more difficult-rooting cuttings, to protect them from all external influences which might destroy them before the made roots. The most proper form of bell-glass is that which gradually tapers from the base to the top, as from glasses of this shape the moisture, which adheres to the inside in the form of drops, runs gradually off without the dropping so injurious to cuttings. This disadvantage is found in all other forms more or less, such as those that are round at the top, or cylindrical, with the top bluntly truncated; and also in beer-glasses, which are often applied to this purpose. The most unsuitable glasses, which are, however, much used, are those small at the base, and swelling out like a globe.

The enclosed air under the glasses will soon lose its oxygen, through the respiring process of the plants within, and also be vitiated by other exhalations; and, if it is not changed, it generates mould, and the cuttings lose their fresh appearance. For this reason, the glasses, if possible, should be daily ventilated and wiped; or, what is still better, as it will entirely renew the air, dipped in a vessel of cold water, and well shaken, so that too many drops of water may not remain on the glass, although they are not so injurious to the cuttings. In an extensive establishment, this operation requires much time, and therefore round holes, of about from half an inch to three-quarters of an inch in diameter, are made at the top of the glasses; a cork is put into it, and taken out or closed as is required, and these will prove very serviceable, if the pans stand on a warm platform in the houses or beds prepared for the purpose.

The cuttings themselves should not be stuck too close together, and all the leaves should be left on, which are above the surface of the sand, soil, &c., which are essential for elaborating the absorbed and deposited nourishment; removing the lower leaves above the part not inserted has an injurious effect upon the cuttings of many kinds of plants.

(*To be continued.*)

CULTURE OF GLADIOLUS IN THE OPEN BORDER.

BY META.

It is somewhat surprising that the flower garden should be so seldom ornamented by the introduction of Gladiolus and other genera of Cape bulbs. They are certainly very splendid in such situations, and their culture is not attended by any difficulties which are not easily surmounted. The Gladiolus is a valuable ornament to the parterre during the summer and autumnal months. Like most other plants used for a similar purpose, it admits of cultivation in a variety of ways; thus, if the bulbs are planted in pots during February or March, and kept in a green-house until they have vegetated, and then removed to a cool frame until the beginning of May, the plants may be had in flower early in the summer. Some of the tender kinds require this treatment, in order to secure their growth sufficiently early in their season, to produce flowers. With more hardy kinds, as G. natalensis, and various mules allied to it, this treatment may be adopted merely with a view to the production of a few early flowers. These latter, if planted out in beds of prepared soil about the middle of April, produce a succession of beautiful flowers, from the end of July to the middle of September. The preparation of the soil is an important consideration in cultivating these plants successfully; this should be done early in the winter months, so as to secure the beneficial action of frost. If the soil is very light, a portion of turfy loam should be incorporated with it; but if stiff and cold, a portion should be removed and replaced with a mixture of gritty road sand and peat earth, which should be well blended with the remaining portion of the natural soil. In either case it should be trenched up one foot and a-half in depth, and left as roughly exposed to the weather as possible. A similar preparation should be made, whether it is intended to raise the plants in pots, and afterwards transplant them, or whether the roots are placed at once into the beds. Supposing the latter case, about the middle, or if mild weather, the beginning of April, let the beds be forked over, and marked out into rows one foot apart, and about four or five inches deep; in the bottom of this furrow place a little clear sand, and then place the bulbs at one foot distant from each other; around each bulb a little sand should be placed, and the soil levelled. When the flower stems have attained a foot or so in height, they should be carefully staked. Just before they commence flowering, if the weather happen to be dry, they should have a few good waterings, given them in the evenings; it is somewhat important not to water promiscuously, as some evil may result from the water lodging at the base of the leaves, it ought rather to be poured carefully on the soil between the plants. As soon as the foliage is matured, and somewhat decayed, or at least, become well ripened, the bulbs should be taken up and well dried by exposure to the sun, and afterwards removed to an airy situation, free from both damp and frost, where they should remain during the winter, until wanted the following season. The bulbs should, in most cases, be divided and planted singly, and those only used which are strong enough to flower; these are so readily produced, that the small offsets seldom need be retained, as they take some time before they have strength enough to produce flowers. G. cardinalis flowers best if left undisturbed, the beds being well protected from frost. The routine of treatment desirable for the more tender kinds consists in potting them early in March, and keeping them either in a greenhouse, or moderately close frame for a short time, then removing them to a cold frame until the planting season arrives; they should be induced to grow as freely as possible here, at the same time allowing them abundance of air. By the beginning of May, they may be planted out, in beds, prepared as already recommended. The genus is rather a sportive one, and many very beautiful hybrids have been originated. When this is made an object, the seed should be saved with much care, as to the crossing. It should be sown about the beginning of March, thinly, in pans of light soil, such as a mixture of peat, leaf mould, and sandy loam, covered with soil to the depth of about half an inch, and placed in a close frame, where it will soon vegetate. The only care the seedlings require is the occasional application of a little water, and protection from the ravages of snails and slugs. When their seasonal growth is completed, they should be ripened off in the usual manner, taking the precaution of not drying them too much, as they are liable to perish when that is the case: a cool place, if dry, is, therefore, most suitable for them. In spring, they should be moderately excited; and when fairly started, they should be transplanted into fresh pans or pots, in rather more nutritious soil than before. Encourage them to make as much and as vigorous growth as possible during the season, and then rest them as before. The next season many of them will produce bloom.

THE FUCHSIA FULGENS, &c.

THE addition of such a beautiful variety of very distinct hybrid Fuchsias within the last five years, has tended to a neglect in cultivating many of the previous kinds which were held in estimation. I am sorry that among the number so treated, the fine species F. fulgens is included. The principal objection to it is, that there is not an equality in the proportion of flowers to the foliage, and that in the usual mode of management the plant assumes a coarse bush-like form. This objectionable feature I have remedied by growing the plant as a standard, the foliage is not near so large, and the fine pendant racemes of flowers are much more numerous. In order to grow it thus, in the spring of 1845, I had a number of tubers, which had been raised the previous year, and in February I commenced forcing them to growth, as they required. I re-potted during the entire following season, and when side-shoots pushed, I immediately rubbed them off, and encouraged the main stem, till it had arrived at the desired height, in sundry instances from three to near five feet high. I used rough turfy loam and well-rotten dung, two parts of loam to one of dung. When the stem is high enough, I allowed the side shoots to push, they soon showed for bloom, and duly encouraged, bloomed amazingly beautiful.

The heads of the plants somewhat varied, of course, as to size, but in several instances, they extended near three feet across. They commenced blooming early in May, and continued so, in the greenhouse, till the middle of October, and afterwards they were loaded with their delicious fruit. At the prime period of blooming, during June and July, each plant had from ten to fifteen heads of bloom, and each raceme had from twenty-five to forty flowers. From my practice with this plant, as well as with the magnificent F. corymbiflora. I am confident that the STANDARD mode of growing them is the best, not only to make them look handsome-formed plants, but to bloom them in due perfection. With the above attention, I am assured these noble species, with their varieties, will stand pre-eminent objects, both in the greenhouse and conservatory, but also during the summer in the open border of the flower garden, and as a central object in a bed nothing looks handsomer. The plants I first bloomed in this way I retain, keeping them dry in winter, and cutting in the shoots at spring, rubbing off all shoots not required to form a future head for blooming. Those turned out of doors in summer, are taken up at autumn, preserved in doors till February, and grown as others till May, when they are re-planted out again.

THE LYCHNIS FULGENS.

BY MARY.

THIS very showy and lovely plant does not appear to be so well known, or so generally cultivated, as its beauty deserves; and finding no other notice of it in the FLORICULTURAL CABINET, I forward the following observations on its culture, which has admirably succeeded with me.

In the beginning of March the seeds were sown in a light rich soil, about six in each half-pint pot, and then placed in a gentle hot-bed; the seeds did not germinate quickly, and not more than half came up. (I think it does not seed freely, as I see none advertised in your various lists for this year.) When the young plants were about three inches high, the pots were removed into the greenhouse, and the seedlings were never disturbed, as I have found by the experience of the previuos year, that they were very impatient of removal. When they seemed to require it, the soil was carefully taken out from the top of the pot, and replenished with a mixture of one-third loam, one-third peat, and one-third leaf soil; they were sparingly supplied with water; with this method of treatment, they flowered beautifully the following July. After flowering they only required sufficient water to enable them to perfect their seed, and to prevent the soil from baking, and then were suffered to subside into that state of rest, which all tuberous roots require. Before winter the roots had grown considerably, and were then repotted in a mixture of two parts loam, one part peat, and one part leaf soil; they were placed in a dry cool part of the greenhouse, and have now (February 3rd), sent out three or four stems from each root, those from last year's seedlings being three inches high, those from the previous year's, six or eight.

In the summer of 1836, I put out into the open border, one or two seedlings raised the previous spring, but the transplanting checked their growth, and the stems died down. The root of one, however, survived, though totally unprotected, and flowered in the summer of 1838, though not so finely as those kept in pots in a cold frame during the winter, and removed into the greenhouse in spring.

Loudon, in his Hortus Britannicus, states, the Lychnis Fulgens to be a native of Siberia, introduced into England in 1822; it may, therefore, be supposed hardy enough to be ranked amongst our border plants, but its beauty will well repay for a little extra care.

I think, probably, seeds sown in the border, and protected by a glass until frosts are over, would succeed, and during the winter, some manure, or coal ashes over the roots might be sufficient, but, as mentioned before, one plant withstood the trying spring of 1837, without any protection whatever. Being a tuberous root, the best time for dividing it would be the autumn, or before potting it for the winter.

I would scarcely believe the report I received with my seedlings in 1836, that the colour was equal to that of Verbena melindrus, while the blossom was an inch across; but this, far from being an exaggerated description, was quite correct as to the brilliancy of the hue, and below the truth as regards the size of the flower, mine being about two inches across; and when two or three were open at the same time, they were almost too dazzling to look at for long together.

PLANTING FLOWERS IN THE BEDS OF THE FLOWER-GARDEN, LAWN, &c.

BY A MIDLAND FLOWER GARDENER.

During the four last seasons I have adopted the following method in disposing of flowers grown in masses in the flower-beds, and on the lawn fronting a nobleman's mansion, and the plan having been much admired and approved, I forward the particulars for the Cabinet.

I first plant my beds (which, for the following method, are generally of some regular form), with some choice and beautiful flower; in the centre of the bed I fix a pin, either of iron or strong wood; this pin is firmly fixed in the soil the exact height to which the flowers that form the mass are expected to grow. Round the margin of the bed, about six inches from the verge, I place other pins at equal distances according to the size of the bed and the flowers intended to be planted.

From the centre pin to the outside ones, I place wires in a neat manner; one is fixed from pin to pin on the outside, so that the whole, when finished, resembles a wheel. Both the centre pin and the outside ones are fixed very firm, to admit of the wire, which is not very strong, being drawn straight and tight. The outside pins should not be too high, as the twiner intended to be planted to run thereon is to form, as it were, an edging to the whole. At each of the outside pins I plant my plants, the more tender sorts in pots; these, as they grow, are kept neatly tied to the wire, and trained towards the centre pin. Other twiners or climbers, of a different kind from those that are trained towards the centre, are planted at intervals, according to their habits or luxuriant growth, round the outside wire, to form the aforesaid edging.

The beauty and success of this method depends on the neatness with which the plants are trained to the wire, and in their being placed at a proper height, so as to mingle, as it were, their blossoms with those forming the mass of the bed. A little taste is also necessary to assimilate as near as possible the plants forming the mass, and those trained to the wires, both as regards size, and, as far as practicable, shape too, as will be seen by the manner in which the following kinds are grouped together.

No. 1. A bed of Escholtzia crocea, with Convolvulus major, on the converging wires, and Clematis Sieboldii for the margins. 2. A bed of Hybrid Mimuluses, with Mannandya Barclayana for the rays, and Lophospermum scandens for the margin. 3. A bed of Nolana atriplicifolia, with Thunbergia alata for the rays, and Petunia nyctiginiflora for the margin. 4. A bed of Streptocarpus Rexii, with Tropæolum tricolorum for the rays, and Cobæa scandens for the margin. 5. Anagallis Philipsii in a bed with Thunbergia alata alba for the rays, and any of the small growing Ipomeas for the margin. 6. Calendrinia discolor for the bed, with Loaza aurantiaca for the rays, and Rhodochiton volubile for the margin. 7. A bed of Lobelia bellidifolia, with Lantana Sellowii for the rays, and Verbena Tweediana for the margin. 8. A bed of Verbena Melindres, with Tropæolum Pentaphyllum for the rays, and Thunbergia alata for the margin. I have merely given the above list to show what may be done in the way of grouping, and which can easily be multiplied at pleasure. The plants I use for training on the wire I always contrive to have a good stock of, well established in pots. Nothing more beautiful than the above arrangement can be well imagined when done with neatness; and the season for planting such beds having now arrived, it is hoped that these remarks may prove acceptable.

THE OLD DOUBLE YELLOW ROSE.

BY A NOBLEMAN'S FLOWER GARDENER FOR THE LAST TWENTY YEARS.

This Rose, in general, is said to be very shy of blooming perfectly, and to remedy this, various situations have been recommended; some have said, plant it against a south wall; others, give it a northern aspect, under the drip of some water-trough, as it requires a wet situation. All this is quackery and nonsense. The Yellow Provence Rose is a native of a warm climate, and therefore requires a warm situation, a free airy exposure, and rich soil.

A very old plant is growing in front of a low parapet wall in my garden, in a good loamy soil and free airy exposure, which is in a state of the greatest luxuriance, and blooms in fine perfection nearly every season.

The Rose has very much engaged my attention for several years, in order to ascertain by what means the evil of the buds being injured, and dropping off, might be avoided, and I am now enabled to state that, if the following treatment be pursued, a splendid bloom may certainly and invariably be obtained.

The plant requires to have a good loamy soil, upon a dry substratum, moderately enriched. It must be planted against a good aspected wall, either full south, or as near as circumstances admit of the latter.

The plant must be trained as is done to a peach-tree, and early in summer, when the shoots are young, a suitable portion must be secured by the wall, as is done to the peach, and all others be taken clean away.

As soon as it is perceived the shoots have embryo buds upon them, a cover of canvas, or something that will cause shade, must be fixed, so as to cover the entire plant.

This shading is essential to success. If the covering is placed so as to keep the rains from the border, recourse must be had to watering, also an occasioned sprinkling by means of syringe must be given over the foliage.

When the blooming is over the shading is no longer requisite, and its removal is necessary to palliate the ripening of the shoots for next year's supply, which is an essential point to be obtained.

My first success with blooming the rose successively was by the following circumstance. A plant was growing at the south side of a vase placed on a pedestal, around which the branches were trained. At the blooming season I found all the buds on the south (sunny side) went off in the usual way, but all that portion of the plant which was on the shady side produced perfect bloom in perfection.

It appears to me to be essential to obtain well-ripened wood, and then to give shade during the period from buds being formed to blooming. These being obtained, success is certain. I have a plant which now annually produces a profusion of fine flowers treated in the manner above specified.

During the first summer that I trained the plant against the wall, a considerable quantity of young shoots was produced; in order to assist the shoots that had buds upon them, I cut off all others, which amounted to three parts of them; so sudden a destitution caused all the buds to drop off, but when the shoots are stripped off at an early stage this evil is entirely obviated.

CLIANTHUS PUNICEUS,

GROWN AS A STANDARD.

BY FLORA.

The Clianthus Puniceus is well worthy of a place in every collection, both for its beautiful foliage and pendant racemes of red flowers, but, grown as a standard, it far surpasses in beauty and elegance any plant I have seen of its kind: I shall mention a few words regarding its culture as a standard. Select cuttings from a plant about the beginning of May or June; the cuttings should not exceed four inches in length, and taken from the same year's growth; recollect that the extremity or point of the cuttings must not be pinched off. After making the cuttings, allow them to remain for a day or two before potting, to dry some of the superabundant moisture from them, which is an advantage gained by the cuttings rooting two days sooner. A 32-sized pot should be filled with white sand, and the cuttings inserted therein to the depth of two or more inches; they will strike readily in a heat of 70° or 75°; if they are covered with a bell-glass the strike will be more successful. After struck, they should be potted off separately, in thumbs or small sixties, amongst a compost of sand, leaf, and loam, with a little well-decomposed cow-dung, all well incorporated together; when potted, they should be placed in a bottom heat till they have matured roots enough to support themselves. Then they should be removed to a more airy situation, either to a greenhouse or conservatory, and great care and attention must be paid to the repotting and watering, or without, the plants will soon form a sickly, stinted appearance. For to make good standards, all side-shoots must be pinched off as soon as they appear, training the plant up with a clear stem to the necessary height required; then, after they have attained the required height, the tops should be pinched off; and that causes them to throw out laterals, and these laterals again stopped makes them still to throw out the more, till at last the plants attain a most luxuriant head, richly decorated with thick but dense pale green foliage. When treated after the above method that I have laid down, then planted out in a conservatory, amongst good rich mould, one-half fresh loam, one-quarter leaf mould, and one-quarter decomposed cow-dung, along with a little vegetable mould and sand; all these to be well incorporated together, and a pit made for the reception of the plants, three feet square, by two and a half deep, filling it up with the above composts, then insert the plant, putting it about an inch deeper than it was in the pot; then there should be a stake of durable wood procured to fasten it to. When planted out it grows more luxuriant than in pots, and has always a more healthy appearance. When in flower, what can surpass it? the bunches of pale red flowers hanging the one upon the other, out of a dense thicket, as it may be termed. I trust the insertion of these remarks will tend to a more general growth of this fine and highly ornamental plant.

THE CULTURE OF ORANGE TREES.

BY A PRACTITIONER.

I HAVE paid particular attention to the subject for twenty years, and have observed those engrafted or budded come sooner to a bearing state, but are never such healthy trees as the seedlings. I find I can bring a seedling Orange-tree into bearing in six years. I have observed the young seedling trees to put out thorns at the base of the leaf; and so long as these appear on the young wood no fruit can be looked for. As the tree is in a luxuriant state, my method to stop that vigorous growth is this: mix half strong brown loam, half peat or heath earth, mixed well together, with a little gravel, to keep the soil from binding to the roots; have pots proportionable to the size of the tree, put them into this soil, which I consider rather poor, but keeps them in good health, and in humble growth; by this management they come sooner to a bearing state. I keep them in that soil till I see blossom appearing, which may be looked for when no thorns push out of the young wood; after that I give them larger pots, then take compost half strong brown loam, half vegetable mould, break some bones small, mix some in the compost, and put some in the bottom of the pots, which feeds the roots a great length of time, and drains off superabundant water. After the fruit is set I have observed the decaying flowers to be in a corrupt state at the base of the fruit, and cause it to drop off; when the fruit is set, I take all the decaying flowers carefully off. In pruning Orange-trees, great care must be taken not to shorten any young wood, as the flower generally appears at the extremity, only cutting out any cross useless wood. I have known some hew down their Orange-trees every year. By this treatment it is impossible for their trees to bear fruit, for in spring they bring forth strong thorny wood, and are no nearer bearing than when one year old. The brown scale is very troublesome to Orange-trees, and retards their growth, and makes them have a sickly, unhealthy look; if the trees are not kept clean of that insect, little good can be expected where they are. I keep my trees perfectly clear of that insect with three dressings in one year, by taking soft soap half a pound, flour of sulphur a quarter of a pound, nux vomica half an ounce, add to these six quarts of hot water, keep stirring till the soap is dissolved; when cold, take a sponge, and wash every leaf on the upper and under sides; three days after I find the insects all dead. I take the engine and throw pure water all over them, which washes all clean off; the trees look healthy, and keep clean for about three months. The temperature of an Orange-house should not exceed 50° or 55° in winter. In summer I give the trees frequent artificial dews, by throwing water over them with the engine, which, I think, causes the fruit to be thinner in the skin than it would be in a dry heat; the watering greatly adds also to the health and beauty of the trees.

CINERARIAS.

These plants may be grown either in greenhouses or pits; the latter I should recommend at this time of the year. The proper compost to grow them in is formed of one part turfy loam, one part peat, and one part horse or cow manure; this latter article should be used in a very decayed state; add to this a little coarse sand to sharpen the soil. Good drainage is essentially necessary to the growth of these plants; a layer of broken crocks, two inches in thickness, will not be found too much for the pots intended for blooming in. Give sufficient air to keep the plants in a healthy state without drawing the foliage. The green fly is a great enemy to this class of flowers, but it may easily be got rid of by fumigating with tobacco two or three times early in the spring. When stock is required of a new variety, the sooner the plants are headed down to within one inch of the pot the better; they will soon make side shoots, which should be carefully divided to let every young plant have a small portion of root; they will do very well in the compost recommended for the large plants, but will require, in addition, a little white sand worked in with the soil, at the root of each, which will cause them to strike much earlier. They may be placed singly in thumb-pots, or put four or five round the edge of a sixty; set them in cold frames, not too far from the glass, and shade them when the sun is powerful.

The properties which constitute a perfect Cineraria for exhibition are these:—1st. The plant should exhibit a healthy appearance, with broad and compact foliage. 2nd. The trusses should be large, round, and close, without any division between the flowers, and should rise sufficiently above the foliage to form a large globular head of bloom; when the branches project, and the trusses are partly hidden with foliage, we consider it defective as a show plant. 3rd. The petals should be broad, firm in texture, and smooth on the edges, forming a close, well-arranged, circular flower, which must not reflex in the slightest degree, and should measure at least one inch in diameter. 4th. The colours ought to be dense, rich, and brilliant, whether edged varieties or selfs. 5th. The centre, or yellow disc, should be one-quarter the diameter of the flower, and should rise above the petals to form a beautiful round centre, which must resemble in shape half a ball; when this property is perfect, it adds essentially to the beauty of the plant.

Descriptive List of Good Show Cinerarias.

Ivery's Sapphire, a compact and good shaped flower; colour, dark rich blue self; petals broad, round, and smooth on the edges. Ivery's Nobilis, a large and beautiful shaped flower; colour, white ground, with petals deeply edged with dark lilac. Henderson's Royal Crimson, a good shaped flower; colour, a rich crimson self; petals broad, firm in texture, and smooth on the edges. Ivery's Brilliant, form, good; colour, a dark rose self; petals broad, and of good shape. Henderson's Vernalis, a good formed flower; colour, a dark blue self, with a fiery centre; petals broad, firm, and even on the edges. Ivery's Fairy Queen, a good shaped flower; colour, a white self; petals broad, round, and smooth on the edges, and very compact. Ivery's Conqueror, form, good; colour, a dark blue self; petals of good substance, and smooth on the edges.—*Gardeners' Journal.*

The following obtained the first prize at the Chiswick show on May the 8th:—Nobilis, Beauty of Systen, Desirable, Pet, Attraction, Prime Minister, Maritima, Standard, Beauty of Wonham, Defiance, Purpurea elegans, Royal Crimson, Red Rover, Vernalis, Compacta, Pride of Dorking, Sapphire, and Countess Zetland.

CHOICE VARIETIES OF FLORISTS' FLOWERS.

RANUNCULUSES.

BY OBSERVER.

In addition to the sorts I selected last month, I recommend the following, for their excellence, without regard to age. They will be found worthy of a place in every collection.

Fifty of the best Ranunculuses.

Selfs.

Œil Noir.—Very fine dark rich colour.

Naxara.—Extra fine dark, one of the best of its class.

Fête Nocturne.—Rich purple, fine.

Duke of Bedford.—Large fine formed crimson.

Giles's Eliza.—Very fine straw, extra form, super variety.

Costar's Apollo.—Very fine dark, rather coarse in petal.

Tyso's Laureate.—Very fine pure yellow.

Comtesse Plaisance.—Very fine yellow, good form.

Les Vos.—Dark purple, very fine.

Rosa Montana.—Superior bright rosy crimson, excellent form.

Tyso's Nivis.—Fine white.

Costar's Tippoo Saib.—Rich dark.

Condorcet.—Fine pure purple.

Bouquet Sanspareil.—Dark olive, very fine.

Spots, Striped, and Edged Flowers.

Flavimorus.—Cream, with purple edge, very fine.

Tyso's Victoria.—Clear white, with crimson edge, very fine.

Aust's Henrietta.—White, crimson edge, good shape, very fine.

Horatio.—Yellow edged, fine, free bloomer, not quite a pure ground.

Tyso's Herbert.—Yellow, with red edge, very fine.

Temeraire.—White, red striped, one of the best of its class.

Lightbody's William Penn.—White, with purple edge, very fine and strongly marked.

Melanges des Beautes.—Red and yellow striped, an excellent old flower.

Tyso's Alexis.—Yellow spotted, extra fine, good form.

Tyso's Attractor.—White, with purple edge, large, very fine.

Kilgour's Queen Victoria.—Cream, crimson edged, large and extra fine.

Costar's Coronation.—Buff, pink mottled, very fine.

Grand Monarque.—Yellow edged, fine, petal rather loose.

Aust's Nonsuch.—White, purple edged, distinct, very fine.

Tyso's Felix.—Buff, with distinct spot, extra fine.

Lightbody's No Mistake.—Cream, purple edged, strong marking, very fine.

Dr. Franklin.—Fine clear white, with purple edge, very fine.

Tyso's Edgar.—Yellow, coffee edged, excellent form, extra fine.

Quentin Durward.—Yellow edged, very fine colours, rather thin.

Tyso's Delectus.—Yellow, red edged, very fine.

Lightbody's Rob Roy.—Cream, crimson edge, very fine.

Imbert.—Yellow, with faint brown spot, very good.

Tyso's Flaminius.—Yellow, with dark spot, extra, one of the best of its class.

Herald.—White, with crimson edge, very fine, excellent shape, high crown.

Tyso's Creon.—Buff, dark edging, very fine.

Glacia.—Yellow mottled, large, and very fine.

Paxos.—White, with deep purple edge, extra fine.

Biddal's Duke of Wellington.—Yellow, delicate edged, very fine.

Macrobius.—White, spotted, very fine.

Lightbody's Endymion.—White, with delicate rose edging, very good.

Tyso's Premium.—White, purple spot, very fine, high crown.

Aust's Queen Victoria.—White with delicate edging, very fine.

Saladin.—Fine yellow, with faint spot.

Sophia, or Ma Délice.—Cream, with rose edge, very good.

Tyso's Vendome.—Cream, with dark purple edge, extra fine, rather sportive.

Waterstone's Epirus.—Yellow, spotted, very fine.

REMARKS ON INCREASING PLANTS BY INARCHING AND LAYERING.

BY A PRACTITIONER.

THERE are many of the most splendid flowering stove, greenhouse, and hardy shrubs, which are only to be propagated but by the methods of either Inarching or Laying them, or if they can be struck from cuttings they seldom grow in a healthy condition afterwards. But a weakly growing species inserted upon the stock of a free-growing kind will cause it to bloom far more profusely and vigorously; an additional advantage too is afforded by being enabled to obtain a plant of considerable size in a short time. I have, therefore, drawn up some practical observations upon the method which I have pursued most successfully for twelve years.

Inarching is a species of grafting differing from it in these particulars, that, whereas in grafting the scion is at once totally separated from its parent plant, and the head of the stock is cut clear off before the splicing takes place, here, on the contrary, neither the scion is separated from its parent, nor the head of the stock cut away, until the union becomes so far complete that the first is unnecessary and the latter injurious. It is, in consequence, much preferable to the common grafting, for evergreens in particular: it is principally practised as the best means of multiplying all the double varieties of Camellia and plants of similar habits, because their strong leaves, if only for a few days deprived of their regular support by being cut clear from the mother stock, if not covered closely with a glass, will be certain to wither and fall off, after which there will be but very slender chance of the scion's completing an union: it is performed as follows:—

Having provided a stock, which should always be some of the coarser free kinds, of the same genus of plants, and nearly of the same diameter as the shoot which is intended for inarching, cut a thin slip, from two to three inches long, and about one third or something better of the whole thickness, smoothly off from each of them, in the clearest part of the stem, with a small sharp knife (a most necessary instrument for this business); the bark of each must then be fitted together in the most exact manner, at least on one side, and tied perfectly tight with good matting; they must be clayed in the same manner as grafts; and, as being within doors in a warm house will occasion the clay to become over-dry and liable to crack, they should, at least in dry weather, receive two or three times a week some water from the rose of a water-pot, or by means of a syringe, to preserve it in a proper moist state, observing to do it in the evening lest the leaves should get scorched by the rays of the sun: a little moss tied neatly round each ball of clay will prevent the water being so frequently necessary, which is, in my opinion, very desirable. Eight or ten weeks will, in general, be found sufficient time for them to unite; at all events, by that time, I think, they may be partially separated from the parent plant by cutting the inarched roots better than half way through; and if, on trial, they are found to be united, and bear that operation well, they may in a few days afterwards be entirely cut off and placed in a shady part of the house, where they must be kept moderately syringed as before, and some additional shade given, according to the state of the weather, for two or three weeks; during which time they may be untied, and the top of the stock cut off in a neat manner, and also any unnecessary part of the bottom of the scion that may remain: let a little clay be again applied, that these fresh wounds may have sufficient time to become properly healed, which will take place in a few weeks. In this manner have I succeeded with Myrtus Pimento, and other plants allied to it, which are particularly difficult to strike or propagate by any other means on the common Myrtle with tolerable success, and also many other plants of the same description upon their kind.

In laying, choice should be made of the young tender shoots of the present year, the soft bark of which will sooner form a callosity and produce roots than that of any of the preceding year's growth. It is particularly necessary to observe, whether the plant intended to be layed is of a brittle nature or not; for, if it is, it will be necessary that the shoots be pegged gently down to the surface previous to laying, and thus left until their tops naturally acquire a perpendicular direction, which they will do in a few days; without this precaution it will be extremely difficult to tongue them without cracking, or breaking them off, but if treated in this manner the most brittle may be layed without danger.

By tongueing is meant, the operation of cutting a small longitudinal scalp, about half an inch in length, on the inner side of the heel or bend which is to be inserted into the earth; about one-third of it should be cut off in a transverse direction, it being so placed that the transverse cut may be immediately on or below the joint; but by no means is the whole of it to be cut away, as practised by some, it being the part which, in most instances, produces the first fibres. Having the layer thus prepared, the earth must be opened with the hand about three or four inches deep, and in the direction of the shoot, into which opening it would be advisable to put a little fresh loam or sand for the immediate reception of the layer, which should be fixed therein at least three inches under the surface; the tongue should be gently twisted sideways so as to prevent its resting within the heel or bend, and the mould immediately closed tight over it. As many layers as are wanted being thus made, let the whole have a moderate watering to settle the mould, and be set or plunged in a good growing heat, as it is of considerable importance to keep the parent plant in a free thriving state.

There are many plants which produce roots so freely that should a branch even touch the surface of the ground they strike almost immediately: these every gardener will soon become acquainted with by their natural efforts, and, therefore, will find it sufficient for their increase merely to insert them in the mould, noting, however, that a slight twist on the part inserted will considerably promote their rooting.

It is a conclusion drawn from several experiments that the layer, which is inserted to a proper depth, roots sooner and better than that which is layed nearer the surface; the self-evident reason of which is, that the deeper they are the air is better excluded, and there is a more regular degree of moisture for the nourishment of the young fibres, when they make their appearance. I must also observe, that no part of the shoot should, on any pretence, be covered with the mould, except that which is meant to produce roots, as the covering of the whole renders it extremely liable to rot; therefore, if any particularly tender plant should happen to be thus treated, it would evidently endanger the whole stool. This may seem an unnecessary observation to some; but I can assure such, that I have seen layers made by people, who thought themselves extremely clever, where none of the parent stool were left in sight, except the tops of each individual layer: what was the consequence? in a few months one-half at least of the stools were without the least spark of life remaining, and of the rest, which were so fortunate as to survive, perhaps not one-tenth of the shoots layed produced plants.

GENERAL TREATMENT OF STOVE AMARYLLIDS.

At a recent meeting of the Regent's Park Gardeners' Society, Mr. Appleby read a paper on the culture of this interesting tribe of plants, touching upon their habitation, the soil, potting, summer and winter treatment, watering, and propagation. The best situated he considered to be a span-roofed low house, at an angle of 50°, running north and south, with a walk down the centre, the stage to be so near the glass as that the plants, when fully grown, may be eighteen inches from it. The house to be devoted exclusively to them, especially in the growing and flowering season. The young bulbs might be grown in pits, plunged in tan, and heated by dung linings. The compost should be strong yellow turfy loam, with one-fourth of leaf-mould or well-decayed dung, adding a little sand; also charcoal in a rough state, mixing the whole without sifting. In potting the drainage must be perfect, regulating the quantity according to the size of the bulb and pot, giving the largest two inches, and the smallest three-quarters of an inch, of draining material. The potting season is when the bulbs begin to grow, which is generally about March. In repotting, gently shake off the old soil, remove all dead roots, and work in the fresh soil carefully without breaking a root, leave the bulb half covered, and give the pot a rap or two on the bench to settle the soil; finish with a gentle watering, and they may then be started. The summer treatment may commence at a heat from 55° to 60° by day, and from 50° to 55° by night, and by the time the foliage is fully expanded the heat must be from 70° to 75° by day and 63° at night; maintaining a moist heat until the bulb is nearly matured, when it must be gradually and at last wholly withheld. Give air on all favourable occasions, and especially as the resting season approaches. If annoyed with insects, fumigate for aphides, wash with a mixture of soap, sulphur, and tobacco-water for white scale, applying it with a soft brush; and this also kills the red spider and thrips: for the mealy bug, wash with spirits of wine; and for worms, water with soot and lime-water. In the winter treatment, the temperature must be reduced to not lower than 40°, nor higher than 50°, and give no water. In regard to water, use none until the plants begin to grow, and then at long intervals. As the flower-spathes and leaves progress it must be increased, and be sure that the ball is wet through: to prove this, it is well to turn out one or more, carefully, of those which appear the dryest, and be regulated by their state. To induce and secure the increase of the bulb, the broad and healthful foliage, and have the flowers in perfection, water when the leaves are about their full size, every third time with liquid manure, and syringe the foliage occasionally. In regard to propagation, to have them from seed, artificial fertilisation is necessary, at which period give a high and moist temperature, air freely, and expose fully to the sun. Sow the seeds in shallow pans; wherever it is ripe, watch carefully, and see that the seedlings do not suffer from damp; when the leaves are an inch in length, pot them off three and four in a pot, in a lightish compost; keep them in a close heat until they become established, and every stimulant must be applied so as to have the bulbs large before winter. Then they must rest, and have no water until spring, when they may be potted into single pots, shifted twice in summer, and treated as before; they will flower the following season. The other mode of increase is by offsets, which should be potted according to their size, and treated as seedlings. Scarce varieties, and bad producers of offsets, may be increased thus:—Cut off the bottom of the bulb, lay it in the sun for an hour or two, in order to dry up the juices; then take a pot a little larger than the bulb, fill it half full of compost, and the other half with damp silver sand, into which press the cut bulb gently, place it on a shaded shelf, and just give as much water as will keep it from shrinking. From a single bulb of Ismene calathina so treated, Mr. Appleby stated he had raised 20 bulbs.

METROPOLITAN FLORAL EXHIBITIONS.

AMATEUR TULIP SOCIETY.

May 25.—The fourth annual exhibition took place at the Horns' Tavern, Kennington, London, and was very attractive. Sixteen stands were placed for competition, and the tables were decorated by a vast number of flowers contributed by members. The Tulips generally were distinguished for brilliancy of colour, particularly the stands from Wymondham, Harrow, Staines, Dulwich, and Sydenham. The first prize was awarded to the Hon. and Rev. R. Wilson, for Dickson's Duke of Devonshire, Triumph Royal, David, Holmes' King, Abercrombie, Cerise belle forme, Claudiana, Alexander Magnus, and Rising Sun. 2nd. To Mr. Middlecott, for Lord John Russell, Roi de Siam, Camuse, Platoff, Holmes' King, Triumph Royal, Bizarre broke 1836, Lalla Rookh, and Walworth. 3rd. To the Rev. Thomas Jephson, for Claudiana, Alcon, Triumph Royal, Maître Partout, Dickson's Duke of Devonshire, Polyphemus, Mentor, Lachesis, and Sanders' Vivid. 4th. To Mr. Bancks, for Platoff, La Belle Negresse, Cato, Hughes' D.E., Rose Aglaia, Grotius, Mentor, Optimus, and Triumph Royal. Seedling prizes were also awarded to Mr. Holmes, for a new bizarre, of novel character, and a new byblomen. Bulbs of the undermentioned flowers are to be presented as extra prizes:—To the first stand, Victoria Regina, by Mr. Groom; to the second, Pandora, by Mr. Goldham; and to the third and fourth, Lalla Rookh, by Mr. Holmes. Blooms of Victoria Regina were contributed by Mr. Groom, and attracted much attention.

ROYAL SOUTH LONDON FLORICULTURAL SOCIETY.

May 26.—The display of Tulips at this meeting exceeded every exhibition of the kind we had previously seen; they were in perfect condition. In the Class for Amateurs, the 1st prize was awarded to J. Hunt, Esq., whose stand contained Lawrence's Fabius, Vestris, Captain White, Triumph Royal, Holmes' King, Cerise à belle forme, Bates' Twenty-four, Catalini, Lord Stanley, Ulysses, Violet Quarto, and Strong's King. To J. Edwards, Esq., was awarded the 2nd prize for Antilopides (?), Triumph Royal, Cleopatra, Aglaia, Bauenivilde (?), Polyphemus, Musidora, Platoff, Duke of Devonshire, Fleur de dame, Roi de Siam, and Lavinia. The 3rd prize was given to the Hon. and Rev. R. Wilson for Abercrombie, Unknown, David pourpre, Triumph Royal, Duke of Devonshire, Dark Cid, King, Princess des Asturias, Rising Sun, Vivid, Alexander Magnus, and Cerise à belle forme. In the Nurseryman's Class the 1st prize was given to Mr. Lawrence, of Hampton, for Polyphemus, Clark's Pandora, Roi de Navarre, Catalini, Duke of Northumberland, Roi de Siam, Madame Vestris, Howard's Byblœmen, Rose Astonishing, Gloria Mundi. Messrs. Norman of Woolwich, obtained the 2nd prize for Dickson's Sir R. Peel, Prince of Orange, Cerise à belle forme, Aglaia, Norman's Sir R. Peel, Lord Blomfield, Royal Albert, Princess Charlotte, Cenotaph, Camuse, Roi de Siam, Triumph Royal, and l'Ambassadeur d'Hollande. The 3rd prize to Mr. Hughes, Kennington, Seedling 171, Polyphemus, Barius, 180, Maitre partout, Triumph Royal, A. O. E. 179, Belle Actrice, 176, 178, and Red Bizarre. Several other stands were exhibited, and an extra prize was given to Mr. Willmer for a stand containing 50 blooms. There was a fine show of Pansies, both from Amateurs and Nurserymen. In the former Class, for 24 blooms, the 1st prize was awarded to Mr. Hunt, Wycombe, for Constellation, Mary Jane, Lady Sale, Exquisite, President, Pizarro, Model of Perfection, Baroness Wenman, Curion, Eclipse, Duchess of Rutland, Virgil, Rainbow, Montana, Middleton, Field Marshal, Isabella, Fanny, Seedling Nereus, Wonderful Seedling, and Prince of Wales; 2nd prize to Mr. Parsons, of Enfield, for Rainbow, Miss Stainforth, Seedling Mary Jane, Conquering Hero, Purple Perfection, Tom Pinch, Juno, Virgil, Euclid, Isabella, Optimus, Beauty of Aylesbury, Regulator, Annette, Excellent, Hero, Bride of Abydos, Hooper's Yellow, Duchess of Rutland, Dido, Pytho, and Mulberry; 3rd prize to Mr. Hall, of Enfield; 4th prize to Mr. Bridges, of Croydon; and 5th prize to Mr. Over. In the Nurseryman's Class, for 36 blooms, Mr. Turner 1st prize; his stand contained Bohemian Girl, Duke of Wellington, Unit, Rainbow, Nonsuch, Duchess of Rutland, Pizarro, Mary Jane, Dr. Wolff, Eliza, Great Britain, Attraction, Caractacus, Sulphurea elegans, One in the Ring, Queen of Tyre, Turner's Reliance, Juno, Exquisite, Lady Sale, Arethusa, Titian, Diamond, Star, Turner's Potentate, Lord Hardinge, Hamlet, Chalvey Rival, Optimus, Turner's Achilles and Othello, Elizabeth, Companion, Mrs. Hamilton, Grand Duke, and Shakespeare; 2nd prize to Mr. Bragg, for Model of Perfection, Field Marshal, Optimus, Diamond, Companion, Mary Jane, Rainbow, Regulator, Perseus, Lady Sale, Duchess of Rutland, Attraction, Isabella, Eclipse, Exquisite, Constellation, Curion, Excellent, Lord Hardinge, Black Bess, Joan of Arc, Dazzle, Great Britain, Pizarro, Duke of York, Virgil, White Sergeant, Seedling Eliza, Seedling Goliath, Arethusa, Hamlet, Euclid, and Seedling Dulcifor; 3rd prize to Messrs. Cutter and Co., of Slough. In Pelargoniums (Amateurs Class), Mr. Robinson, of Pimlico, received the 1st prize for Nestor, Aurora, Madeline, Sarah, Sylph, Akhbar, Mogul, and Sunrise; 2nd prize to Mr. Coysh, for Duke of Cornwall, Matilda, Pluto, Hebe, Phillis, Pulchellum, Enchantress, and Sir Robert Peel; 3rd prize, to Mr. Moseley. In the Nurserymen's Class, for 12 varieties in 11-inch pots, Mr. Gaines showed Duke of Cornwall, Emma, Coquette, Erectum, Queen of Bourbons, Alba superba, Priory Queen, Lady Sale, Rising Sun, Enchantress, and Matilda.

HORTICULTURAL SOCIETY, REGENT-STREET.

June 1.—At this meeting several remarkable plants were produced, more especially from Messrs. Veitch and Son, of Exeter, who sent their Rhododendron Javanicum, a new species from the mountains of Java, extremely handsome, both as respects the beauty of its foliage, and the great brilliancy of its orange-red blossoms. This was the imported plant, small and weak from travelling, and though beautiful in its present state, much inferior to the native specimens, and certainly equally inferior to what we may yet expect it to become. It will possibly prove about as hardy as a Chinese Azalea, and promises to be a great acquisition, as well on account of its own intrinsic merit as for the purposes of hybridisation. The same nurserymen also sent a Browallia—a shrub some 2½ feet in height, quite new, covered with small shining leaves and round orange-coloured flowers, about as large as a shilling, forming an extremely gay-looking bush, with which we have nothing of the kind at all comparable. Associated with it was likewise a new Fuchsia from Peru, resembling Corymbiflora in habit, but producing singly from the axils of the leaves, long violet-tinged, rosy-pink apetalous flowers, green at the ends. Also a small specimen of Lysionotus longiflorus(?) an Æschynanthus-like plant, having four long orange-coloured flowers in a cluster, giving, however, little idea of the beauty to which we may expect the plant to attain when well grown; for, in a dried specimen which was exhibited, instead of four, there were no fewer than fifteen flowers in a cluster. In the same collection were, moreover, Scutellaria incarnata, a purple-flowered species; and a Dendrobium certainly new; but about which, in its present state, nothing decided could be said. A certificate was awarded for the Fuchsia, and two large silver medals, one for the Rhododendron Javanicum, the other for the Browallia. Of ORCHIDS, a nice collection was exhibited by Messrs. Loddiges, of Hackney, in which were five species of the charming genus Aerides; three Saccolabiums; Vanda lamellata, and a variety of Roxburghii; Oncidium roseum; Cyrtochilum filipes; a spotless variety of Dendrobium sanguinolentem; Epidendrum patens; Cattleya Mossiæ, and its variety Aurantia; together with the clear yellow-lipped Oncidium bifolium; Brassia verrucosa; and brachiata: a large silver medal was awarded. From Mr. Catleugh, of Chelsea, were Clerodendron splendens, well-grown and flowered; Torenia asiatica, small, but charmingly bloomed; Gardenia radicans; a red variety of Epiphyllum speciosum, larger and much handsomer than the species; a neat-looking seedling Cineraria "Tricolor," and Azalea "Catleughii," a variety of good form and colour. A Banksian medal was awarded for the Clerodendron and Torenia. Messrs. Henderson, of Pine Apple-place, sent a variety of Campylia holosericea called elegans, a Bossiæa, Chironia glutinosa, and Erica sindryana, apparently a free-growing variety in the way of hiemalis. J. Allnutt, Esq., of Clapham, sent Azalea fulgens; and from Mr. Ambrose, of Battersea, was a very pretty fancy Pelargonium named Jenny Lind, for which a certificate was awarded. S. G. G. Seager, of Poole, sent two Dendrobiums resembling D. cucullatum and D. nitidum; and J. H. Schroder, Esq., of Stratford Green, blooms of a new Stanhopea, and a variety of Aerides crispum. From Mr. Glendinning, of Chiswick Nursery, was the stately Gardenia Stanleyana, and the pretty blue-flowered Heliophila trifida. Some garden syringes were exhibited, of which one from Mr. Biertumpfel, of Albany-street, Regent's Park, deserves mention, on account of its cheapness. It was made of hard white metal. Ornamental garden-pots were shown by Mr. Goode, of South Audley-street, Grosvenor-square. From the garden of the Society were five species of Epidendrum, four Oncidiums, Cattleya Mossiæ, Brassia verrucosa, Barkeria spectabilis, thriving well on a block; a good Aerides crispum, and Acanthophippium bicolor. Also Mr. Fortune's Lysimachia candida, his Rhynchospermum jasminoides, a handsome white-flowered greenhouse plant, Indigofera decora, and Campanula nobilis. Along with these were also Heliophila trifida, Cereus crenatus, a white-flowered species rivalling in beauty the night-blowing Cereus; a fine mass of Lilium longiflorum, the bright red-flowered Scutellaria coccinea, Rhodanthe Manglesii, Mussænda frondosa, Statice mucronata, Lindleya mespiloides, and six Mammillarias.

ON FUCHSIA FLOWERS NOT EXPANDING.

BY MR. A. FYFE, OF EDINBURGH.

Being a long subscriber to the Floricultural Cabinet, I hope I may be permitted to occupy a few lines in it, to detail the misfortune under which myself and others suffer, and to solicit information, by a remedy being described by some reader.

I am an ardent admirer of the beautiful tribe of Fuchsias, and, along with some of my friends, amateur growers of them, possess a fine collection. Not being favoured with all the advantages for growing them vigorously in the City that other situations admit, the plants do not bloom as is desirable. The plants generally are freely furnished with flower-buds, but not more than one in twenty ever expand fully, but drop off at a previous state. Some of those flowers that do partially open only burst at one side, exhibiting a portion of the petals, but are destitute of pistil and stamens. The buds appear to be coated over with a glutinous matter, which binds the petals, so as to prevent a proper expansion of the flower, and hence the bursting of the side arises by force of the increased size. I cannot discover from whence the glutinous matter arises, nor why the buds thus prematurely drop off. In order to prevent the injury complained of, I have given a liberal supply of water, but without success; and, on the other hand, I have withheld in some degree, so as to keep the soil in a moderate moist state, but only realized the same result. If some reader of these remarks, who can give us a successful remedy, will please to forward it for insertion in the next Number of the Floricultural Cabinet, it will very much oblige myself and others.

PRESERVATION OF PANSIES.

BY DAHL, OF MANCHESTER.

Having a good sized bed of the Pansey, which had grown rank, and covered the bed, in the autumn it was cut out, and earthed up to make it look clean, and preserve through the winter. The cuttings were thrown on the ground on one side of the bed, and, wanting a hole in which to deposit some night-soil, the mould was thrown on the vacant ground, and covered the cuttings of the Pansies. It happened that the whole of the mould that was thrown on them was left undisturbed the whole of the winter, and in the spring was filled into the hole. How great was my surprise when we came to the level ground; there was the cuttings of the Pansies as fresh, and nearly as green as when cut off, and all moist; every joint had sent out roots, which were cut up, planted, and made good plants. The winter had been severe, and nearly all the old plants were dead, and thus, by mere chance, I saved my sorts.

P.S. In making the above hole we came in contact with the roots of a pear-tree that had grown to a good size, but never bore fruit; a great many of the roots were cut away. Strange to say, the next year it bore a large crop of fine fruit. The query is, what caused the change, the fresh night-soil, or cutting the roots?

ROSES.

BY ROSA.

One of your correspondents inquires how the Crimson Hybrid China Rose "Fulgens" is made to flower? Simply by using the knife very sparingly in the pruning season. If you cut back the Hybrid Chinas, as you ought to do ordinary Roses, many, and especially Fulgens, will not flower the next season. I did not discover this for some time, and obtained an amazing growth of wood without any flowers; since I have shortened the shoots of the preceding summer about one-fourth part only of their length, I have found this Rose bloom as freely as any. The best mode of training this Rose, and its brethren, Beauty of Billiard, Brennus, Legouvé, Triomphe D'Angers, &c., all splendid free-growing Roses, is to get them standard high, and place against them an iron stake; the feet made square and flat, and eighteen inches long; the stake branching off at the top, in the form of a cross, so as to support an iron ring, three feet in diameter, which should stand about two or three inches lower than the head of the stock. At the winter pruning, a sufficient number of the shoots must be brought down all round the circle, and tied with tar twine. These Roses, thus treated, wiil present magnificent heads of flower the following summer.

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

PINKS should now be propagated by pipings, if not put off last month; the sooner the better. Carnations and Picotees may also be increased in a similar manner. The uppermost shoots from the parent plant are the best for the purpose; they more readily strike root than the very robust ones. Cut through the stem close under the third joint from the top, and dress off the lowest pair of leaves; then insert the pipings in the prepared situation, pressing the soil closely to the stem; but be careful not to bruise it. A somewhat exhausted hot-bed is most suitable in which to put them, having but a slight warmth. A good close loam is the best soil for them striking in; when about to put in the cuttings, a short time before, sprinkle the soil over, so as to have it moist; when the surface has dried a little, spread over it about an eighth of an inch of white silver sand, and then put in the cuttings. Small hand-glasses, about a foot in diameter, should cover them, so that the dimensions of each should be marked out before planting. The cuttings do best covered with small glasses, and more especially if the frame sashes are over the whole. When the pipings are watered, at first, or afterwards, always allow them to be tolerably dry before closing them up with the glasses, or they will be liable to suffer by mildew. Some excellent modes of increasing these flowers by pipings, cuttings, and slips, have been inserted in former volumes of our Magazine, and we refer our readers to them, as they are instructions generally for propagating them in the open bed of the garden. The Pink blooms will require attention, to prevent them bursting the pods; this is easily done by strong India rubber rims; they are cheap, a hundred or more for a shilling, and may be obtained of the booksellers; they allow the pod gradually to open, but prevent its bursting. These are equally applicable to Carnations and Picotees. Matting is often used for the same purpose.

Ranunculuses.—Protect the beds overhead by canvas, or similar covering, so that the flowers are shaded from sun and rain. The bed must be liberally supplied with rain or pond water, pouring it between the plants.

Carnations and Picotees in pots will require regular attention in watering, &c.

Layering Carnations, Picotees, Mule Pinks, Double Sweet Williams, and similar plants, should be attended to as early as possible. Budding Roses may now be commenced; see Articles upon in former Volumes. Plants put out in masses, whether they are annual, biennial, &c., or greenhouse plants, as Pelargoniums, Heliotropes. Verbenas, &c., must have all encouragement, by carefully loosening the surface of the beds, giving a free supply of water, &c., at the evening, rain or pond water. Chrysanthemums will require shifting into larger pots. Auriculas and Polyanthuses in pots must be kept in a shady place; do not allow water to be poured into the heart of the plant, or such will very likely be rotted. If attacked by green-fly, have immediate recourse to their destruction. Thin away all unnecessary single-flowered Ten-week or German Stocks. Tulips, Crocuses, and similar bulbous plants, &c., will in many instances be perfected, as the foliage indicates the necessity of taking them up; let it duly be attended to in dry weather—See Articles upon. Such shrubby plants as are increased by budding should now be done. Sow Mignonette to bloom in September. Pansies increase by cuttings. Ripe seed should immediately be sown in pots, or a shady border; the soil to be constantly kept moist. Seeds of biennials to bloom next year, as Scabious, Canterbury Bells, Sweet William, &c., may still be sown. Cuttings of Dahlias now struck will make good tubers this season.

IN THE GREENHOUSE, STOVE, &c.

The greenhouse, &c., will have to be kept gay with the Achimenes, Balsam, Globe Amaranth, Browallia, Brachycoma, and similar plants; attention to shifting into larger pots will be necessary, so as to keep them growing, and so promote the increase of flowers. Nearly all kinds of greenhouse and stove plants, &c., will now strike freely; the shoots having attained a due firmness. Pelargonium cuttings should now be put off, in order to have plants suitable for next year's blooming, Green fly, red spider, &c., often commence depredations now; remedies must at once be applied. Give all air possible, and shade from hot midday sun; it prolongs the period of blooming. Let the plants be syringed overhead frequently, avoiding the blossoms. Sprinkle the floor twice a-day with water, it materially assists the plants, in cooling the house with a moist air. Azaleas, &c., now finished blooming, should have their growth encouraged, so as to make early, vigorous wood for next year's blooming. Amaryllises, and similar plants, which have bloomed, and the foliage indicating maturity, should have less water, &c., so they may gradually be induced to wither, &c., preparatory to their season of rest; it is a good plan to place them apart from other plants, and if in a frame, near to the glass, or on a back flue, &c., it is advisable to have so circumstanced. Calceolarias that have ceased blooming should be re-potted; cut off dead tops, place the plants in a situation where they can be shaded from hot sun, admitting the morning and evening sun. Some greenhouse and stove plants are readily increased by budding, that should now be done. Cinerarias that have done blooming should have the tops cut off, be fumigated in a close frame, as they are often affected with green fly; after which the plants should be turned out of the pots, and planted in a somewhat raised bed, of good soil, in the garden. Roses that have been forced, and now out of bloom, should be set at rest for a month or six weeks, placing them in a rather shady situation, and endeavouring to prevent the pushing of young buds; after this period they should be partially disrooted, and re-potted in good compost; such plants will generally bloom through the following winter. The tubers of any of the

Tropæolums which have ceased blooming, and the tops withered, must be taken out of the soil, or be kept in a bag, &c., or the pot must be put aside, where it may have the soil kept dry till potting time. Greenhouse plants placed in the open air in pots should have frequent syringing at the under side of the foliage, to destroy, or keep down insects, &c. The shoots of many of the stove Orchideæ will now be far advanced in growth; they will, in consequence, require a larger supply of moisture in the atmosphere and at the roots than at any other season; this will render syringing and pouring water over the flues, floor, &c., twice or more every day.

THE EFFECTS OF GUANO ON THE FUCHSIA.

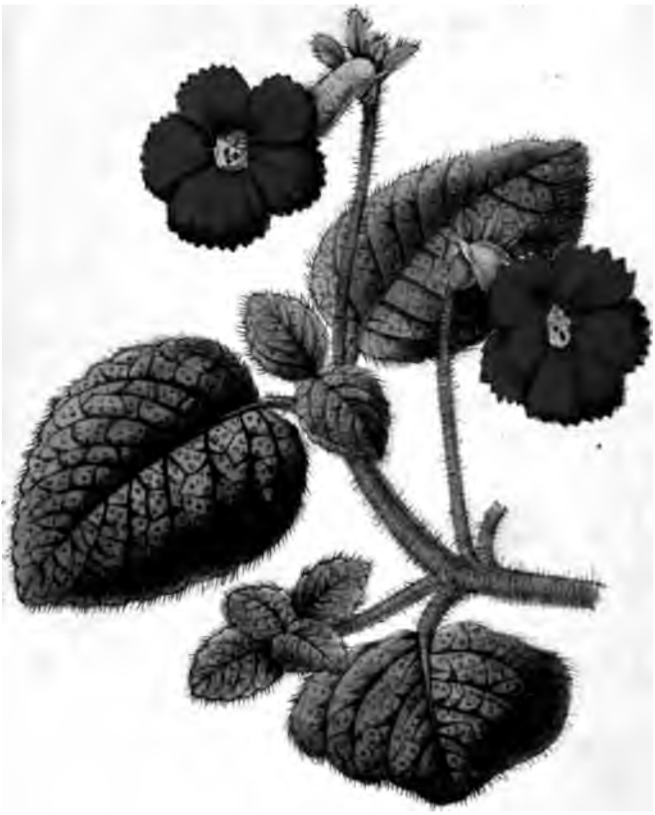
BY DAHL, OF MANCHESTER.

It is now a long time since I sent you any communication, having some time since removed from the south to this smoky, damp, and cold atmosphere, where there is but little excitement for floricultural exertions.

Having seventy or eighty pots of the Fuchsia, some good sized plants, they had all been potted in good stuff, rich and light, and mostly from small pots to large ones. As I much prefer the one-shift system, they were kept in cold frames, with the lights off, to harden them for the open ground. When my Tulips were taken up, each pot was put in the ground up to the rim, and watered two or three times in the week with guano water, thus prepared; about three tablespoonfulls put into a quart of boiling water, which was allowed to stand twelve hours, and then mixed with two gallons of rain-water; with this water the earth in the pots was well saturated, and every night the foliage was well watered with rain-water; and such was the effect on the plants, that the growth was immense, the bloom profuse, and the plants became fine specimens. The plan will well repay for the little extra trouble.

BRIEF NOTES AND CORRESPONDENCE.

' Nature of Plants.—*J. Austen.*—You will derive much pleasure and instruction in this matter from the perusal of Liebig's excellent treatises on Vegetable Chemistry. It appears in reality that plants have some power of accommodating their functions to the nature of the gaseous elements by which they are surrounded; solar light undoubtedly has a very powerful effect on them, as, under its influence, they exhale large portions of oxygen and moisture; and the experiments of M. Condolle demonstrated its effects to be so great, that plants were wholly uninjured by the action of gases whilst subject to its influence, but which immediately destroyed them at night; even the application of chlorine, and other deleterious substances, to the roots of plants is proved to be innocuous during the day, though they are at once destroyed by similar treatment at night. Muriatic acid gas, nitrous acid gas, and sulphuretted hydrogen, were each tried in this manner with the same result. The notion that plants exhale carbonic acid gas during the night is open to much doubt; because, from numerous analyses that have been made, the air of the house was always found to contain the same proportions of this gas during the day as well as during the night.



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Achimenes cupreata.

FLORICULTURAL CABINET

AUGUST, 1847.

ILLUSTRATIONS.

1. ACHIMENES CUPREATA—Copper-Leaved.

WE feel assured that our readers, with ourselves, have been highly gratified with the numerous beautiful species and seedling hybrids which have been added to this very lovely and ornamental family of plants during the last five years. We have now the additional pleasure of figuring another handsome species, which was discovered by Mr. Purdie, the collector, sent out from the Royal Gardens of Kew, on moist banks in New Grenada. It has recently bloomed in that establishment, and proves to be a very interesting and valuable addition, well deserving to be in every collection. Having this species in our own, we find it to grow very freely when treated in all respects as the other kinds. The plant is inclined to grow pendant down the sides of the pot.

The large dark copper-coloured hairy leaves have a singular appearance, more especially so when in contrast with the bright rich-coloured flowers.

The very charming species Achimenes coccinea, formerly known as Cyrilla pulchella, and subsequently Triverania coccinea, has long been one of the prettiest ornaments of our stoves and greenhouses, and even under the disadvantageous mode of its treatment during many of its earlier years in this country it was universally admired; but by the improved method of culture which has been pursued during the last dozen years, it is unequalled by any other plant of its size that we are acquainted with. Several articles upon its culture have been inserted in former volumes, one of which details the practice of Mr. Simpson, gardener to J. Hustler, Esq., and whose plants we had the pleasure to see in great perfection, far beyond any other we have seen at any exhibition or other garden establishment. The Article is inserted in Volume vi. of this Magazine, and some valuable particulars of management by Mr. Chitty, in the January Number of the present year.

The following kinds are of the habit of A. coccinea, but the flowers are a little larger, viz.:—

A. atrosanguinea, a deep blood-red.
A. Beatonia, a very rich scarlet.
A. carnea, a beautiful deep flesh-colour.
A. coccinea splendens, large bright scarlet.
A. elegans, deep rosy lilac.
A. formosa, rich purple crimson.
A. pulchella.
A. rosea, rich deep rose.
A. rosea major, large deep rose.
A. magna superba, large rosy-lilac.

The above eleven kinds flourish, bloom vigorous and profuse, by the following method of treatment.

Early in February take the pots that contain the roots of the plants that have flowered the season previous, and carefully remove the surface soil till the small tubers appear; then fill the pots up with a compost of peat, light loam, and leaf soil, and give the whole a gentle watering; afterwards place them in a fruiting pine-stove or hot-bed frame, the temperature of which is kept from 70° to 85° of heat. Give water sparingly for about ten days, and afterwards more freely, so as to effectually moisten the whole of the soil to the bottom of the pots, which will have become very dry from having been kept during the winter without water.

When the shoots are about three inches high, turn the balls out of their pots, and carefully break them till you can divide the young shoots. Then select the strongest, and retain all the roots attached to them, and plant singly into sixty-sized pots, in the same compost as recommended for earthing up, with the addition of one-fifth fine clean sand. Grow the plants in a moist heat and in a slight shade, occasionally sprinkling them with a syringe or the fine rose of a watering-pan. As they advance in growth and fill their pots with roots, frequently repot them into a size larger, till finally remove, the strongest plants into sixteens, and the others into twenty-fours, using the same kind of compost, except for the last shifting, at which time give them pots two sizes larger, and add one-fourth of well-decomposed hot-bed manure, using the other part of the compost more turfy and open. Be particular in draining the pots well at each shifting with plenty of broken pots, and to the depth of one inch at least at the last potting. Examine them at each removal, and take away any suckers that may appear about their stems, and also two or three of their lowest side branches; this tends to strengthen the main stem, and encourages them to make fine symmetrical pyramidal heads. After they are well established, and are beginning to produce flowers, place them, some in a cooler stove, and others in the greenhouse, being careful that they enjoy as much light as possible, which materially enhances the brilliancy of their scarlet flowers, and adds much to their general lustre. We have had plants so treated two feet high, and the same in diameter, forming one mass of beauty and brilliancy.

After they have done flowering, gradually withhold water, but do not cut their stems away till they have entirely died down. Keep the dormant roots in the pots, on a shelf in the greenhouse, without any water till they are again wanted to vegetate.

Achimenes picta blooms far more profusely by the following treatment:—the tubers being preserved through winter as the others are directed to be done, must be excited quite early in January, and when the plants can be separated pot them singly. As soon as they are large enough, cut off the tops at two or three inches long, close under a joint, and strike them in sand; they readily root, pot off as soon as rooted, and treat in all respects afterwards as stated in the particulars relative to Achimenes coccinea.

Plants of this species raised from the tubers grow much more into stem and foliage, but are shy of blooming, whereas those from cuttings, whilst they grow vigorously, bloom profusely. It can be kept growing through the winter, so that, where convenient, a large plant being kept for the purpose of supplying cuttings, forwards the preparation of plants early in spring. Plants raised from cuttings do not produce such tubers for next year's pushing, as do those grown from the tuber, so that a plant or two grown from the tuber is desirable even for the certainty of a stock.

Achimenes pedunculata and hirsuta also bloom more freely, when raised from cuttings, but they become more dwarf than when produced from the tuber.

Achimenes longiflora and grandiflora flourish admirably when treated as A. coccinea, if large specimens be the object. They will do well, and produce a pretty effect, if grown in baskets, and be suspended, as is done with many of the Orchideæ; the stems hang over the sides, and bloom very freely.

A. argyrostigma grows and blooms the best when treated as the grandiflora. If a large bush is required, that is readily accomplished by having several plants in the same pot.

The robust class, as A. grandiflora, hirsuta, pedunculata, &c., bloom profusely and make handsome dwarf bushes; when grown in pot pans about five inches deep and a foot or half a yard across, they produce less foliage.

2. TROPÆOLUM SPECIOSUM—SHOWY-FLOWERED.

In remarking upon new and rare plants in our last Number, we gave some particulars of this valuable acquisition. It was exhibited at the Chiswick Gardens' Horticultural Exhibition, and at the Regent's Park Botanic Gardens' show, by Messrs. Veitch's, and was univerally admired. Those gentlemen obtained it from Patagonia, in America, and, doubtless, it is the most showy species ever introduced into this country. It has the habit of the well-known T. pentaphyllum, grows very freely, blooms most profusely, and appears likely to bloom all the summer season. It ought to be grown in every greenhouse, and would there prove to be one of its most lovely ornaments. We hope to possess it as soon as plants are offered for sale.

NOTES ON NEW OR RARE PLANTS.

ANGULOA CLOWESII, VAR.—MR. CLOWES'S ANGULOA VARIETY.

Orchideæ. Gynandria Monandria.

This fine plant was sent to the Royal Gardens of Kew by Mr. Purdie, and it has recently bloomed in the fine collection of the Duke of Northumberland, at Sion Gardens, near Kew. Each of the flower stems are single flowered. A separate flower is about three inches long by two broad, slightly hooded. Sepals and petals a bright yellow, and the lip tipped with a deep orange colour. It is a beautiful variety.

ASYSTASIA COROMANDELIANA.

Acanthaceæ. Didynamia Angiospermia. (Syn. *Ruellia secunda.*)

It is a beautiful hothouse plant; a native of the East Indies. It is a free bloomer, and easily cultivated; it blooms from August to December. The flowers are produced in terminal racemes. Tube one inch long, yellow; the limb is a beautiful lively blue violet, about an inch and a quarter across. It deserves to be in every collection of stove-plants. It is in the nursery of Messrs. Henderson, Edgeware-road, London.

CLEISOSTOMA IONOSUM—VIOLET-SCENTED.

Orchidaceæ. Gynandria Monandria.

Mr. Cuming sent this pretty species from Manilla to Messrs. Loddiges, with whom it has bloomed. The flowers very much resemble the Oncidiums; each blossom is about an inch across, flat, yellow, with cinnamon-brown coloured bars, having a white lip, with a few red streaks. They are produced in an open branching panicle of two feet long, and have a very pleasant violet scent. It well merits to be in every collection. (Figured in *Bot. Reg.*)

DENDROBIUM CHRYSOTOXUM—THE GOLDEN-ARCH DENDROBIUM.

Imported from the East Indies by Messrs. Henderson's in whose collection it bloomed the last spring. It very much resembles the D. densiflorum, but has the lip curiously fringed, not shaggy. The flowers are produced in a spreading raceme. Each blossom is an inch and a half across, a rich, deep golden yellow, with a brownish-red circle towards the base of the labellum. It is a very handsome species, well deserving cultivation. (Figured in *Bot. Reg.*)

DIANTHUS HENDERSONIANUS—MR. HENDERSON'S PINK.

It is a very rich deep crimson-coloured variety, supposed to be between the carnation and China pink, very double, and a separate blossom; is near two inches across. The plant has the habit of the Carnation and the flowers of the pink. It is a fine border plant, readily increasing by slips, layers, or pipings. It is not known where it originated, but is in Messrs. Henderson's collection at Pine Apple Place Nursery. (Figured in *Pax. Mag. Bot.*)

HYPOCYRTA LEUCOSTOMA—WHITE-MOUTHED.

Gesneriaceæ. Didynamia Angiospermia.

Mr. Purdie sent this plant from New Grenada to the Royal Gardens of Kew. It is a stove-plant, growing about a foot high. The flowers are tube-formed, about three quarters of an inch long, produced numerously around the stem at the axils of the large leaves. They are of a buff-yellow, with a few red streaks. It blooms early in spring. (Figured in *Bot. Mag.*, 4310.)

LEUCOTHOE PULCHRA—THE ELEGANT.

Ericeæ. Decandria Monogynia. (Syn. *Andromeda pulchra.*)

It originally came from Brazil, and has bloomed in the cool greenhouse at the Royal Gardens of Kew. It is a shrubby plant, growing two feet high, the branches erect. The flowers are produced very abundantly in lateral racemes of four or five inches long: these racemes proceed from the main stem; one from the axil of every leaf for the length of several inches of the terminal portion of each principal branch. The flowers point downwards, a greenish-white, a separate blossom being about half an inch long. It is equally handsome in foliage and in flower. (Figured in *Bot. Mag.* 4314.)

ONOBRYCHIS RADIATA—RAY-FRUITED SAINTFOIN.

Fabaceæ. Diadelphia Decandria.

It is a hardy herbaceous perennial plant, grows about a foot high, blooming profusely. Its pea-shaped flowers are produced in long conical-formed spikes; they are white, with a central yellow spot. It is very showy and neat, and a pretty thing for the flower garden, blooming from May to August. It is in the garden of the Horticultural Society. (Figured in *Bot. Reg.*, 77.)

PUYA ALTENSTEINII, VAR. GIGANTEA.

Bromeliaceæ. Hexandria Monogynia. (Syn. *Pitcairnia undulatifolia.*)

This magnificent stove-plant was sent by Messrs. Lucombe and Pince to the Royal Gardens of Kew, where it has recently bloomed. The flower stem rises to two or three feet high, and the spike of white flowers is about half that length. The stem and the bracts are of a rich bright red, and the white blossoms issuing forth from among the rich coloured bracts produce a fine effect. It is a very noble variety. (Figured in *Bot. Mag.* 4309.)

RIGIDELLA ORTHANTHA—UPRIGHT-FLOWERED.

Iridaceæ. Monadelphia Triandria.

It is a native of Mexico, and has bloomed in the nursery of Messrs. Knight and Perry, of King's-road, Chelsea, and requires a warm greenhouse or temperate stove. It is a bulbous perennial plant, growing about half a yard high. The flowers are terminal, each consisting of three large petals of a rich deep scarlet colour. A separate blossom is about four inches across. It requires the usual treatment given to bulbous plants as to rest, repotting, &c. (Figured in *Pax. Mag. Bot.*)

SPIRÆA PUBESCENS—DOWNY SPIRÆA.

Roseacæa. Icosandria Pentagynia.

A native of China; Mr. Fortune discovered it at Chusan. It is a neat shrub, growing about two feet high. The flowers are white, produced in umbels; they are slightly fragrant. It is neat and pretty, and very desirable for the front of a shrub border. (Figured in *Bot. Reg.* 38.)

VIMINARIA DENUDATA—LEAFLESS RUSH-BROOM.

Leguminosæ. Decandria Monogynia.

A native of Australia, shrubby, and without leaves; its rush-like twigs forming a pretty bush. The flowers are produced freely, in long racemes, the spikes being about six inches long: their pretty pea form and bright orange colour render it a very ornamental plant for any greenhouse. It was introduced some years since, but only requires to be known to become generally grown. (Figured in *Pax. Mag. Bot.*)

NEW PLANTS NOTICED IN NURSERIES, &C.

DENDROBIUM EGERTONIA.—This new species is in the collection of Sir Philip Egerton, by whom it has been introduced into this country. The flowers are a pale pink, with the middle of the lip having a dull yellow blotch, and delightfully scented at the evening.

DENDROBIUM MESOCHLORUM.—A fine species, imported by Messrs. Veitch's from India; it was exhibited at the recent Horticultural Society's show at Chiswick, and a medal was awarded marking its merit. The flowers are white, having a rich violet spot at the tips of the lip and petals, and in the centre of the lip there is a stain of green. They are slightly fragrant.

IXORA JAVANICUM.—Messrs. Veitch's exhibited a plant of this fine and new species at the Chiswick show. The flowers are produced in large heads; they are of a deep orange colour.

IXORA HYDRANGOFORMIS.—Messrs. Lucombe and Pince exhibited it at the Regent's Park Gardens' show. It had been introduced to this country by Mr. Low, junior. It is a noble-looking species, with fine heads of bright orange-coloured flowers.

BEGONIA FUCHSIOIDES.—Some plants of this singular species have been exhibited at the above shows. The deep scarlet drooping flowers produced a pretty effect. One or two of the plants had been improperly managed, being long and naked. It can be bloomed beautifully, quite a dwarf bush, and then is very ornamental.

SCUTELLARIA VENTENATII.—A fine plant of this singularly handsome flowering plant was exhibited by us at the Regent's Park show, which was much admired, and a prize awarded for it. The flowers are borne in long spikes; they are of a very rich violet colour.

GESNERIA ELLIPTICA, var. LUTEA.—We also exhibited a fine specimen of this lovely bright yellow flower, for which a prize was awarded.

Gloxinia alba-sanguinea.—Was shown by the Messrs. Veitch's. The flowers are flesh-coloured, with a reddish-purple mark down the throat; it is a pretty variety.

Erithryna Bidwellii.—The flowers are of a deep crimson colour, about one-third the size of the well-known E. cristi-galli. This was shown by Messrs. Veitch's. It appears to be a dwarf-growing plant.

Plumbago (New species).—The plant has much the light green appearance of the white-flowered Plumbago Zeylanica The flowers are similarly produced, but much larger even than the Prosea, a separate flower being three quarters of an inch across, and a deep blue colour. It was shown by Mr. Eyles, gardener to Sir G. Larpent.

Medinilla speciosa. Of the natural order Melastomæa. It is a noble-looking plant, producing abundance of flowers in large branching panicles. Each flower is an inch across, flesh colour, with very distinct blue filaments; it is very pretty. Shown by Messrs. Veitch's.

At the Royal Gardens of Kew.—In the greenhouse, **Armeria grandiflora**, Great flowered Thrift.—This is a very handsome species. The plant was about two feet high, having many flower-stems about a foot long, terminated with a large globular-formed head near three inches across, of beautiful rosy pink flowers. It is a very desirable plant.

Polygala juncea, Rush-leaved.—The plant was trained to a cylinder-formed wire frame, producing rosy-purple flowers.

Diosma uniflora.—This is an old inhabitant of our greenhouses, and when properly grown is one of the most striking dwarf shrubs grown. The present plant was three feet high and as much across; there were at least 150 flowers expanded. It well merits a place in every greenhouse.

Diosma capitata.—A neat plant, a profuse bloomer, and with its numerous heads of white flowers produces a pretty effect.

Mirbelia illicifolia.—A pretty plant, the flowers yellow, with a red keel.

Trymalium odoratissimum.—The flowers are produced in branching panicled heads; they are of a pure white, fragrant. It is a profuse bloomer, and produces a delightful effect. It deserves to be in every greenhouse.

Ruellia violacea.—The flowers are of a violet colour, produced in long spikes.

Tropæolum tricolorum var. Jarrattii.—Trained to a cylindrical wire frame about a foot in diameter and four feet high. The plant covered the frame, and was most profusely in bloom, producing a charming appearance.

Impatiens platypetala, broad flat-petalled Balsam.—This is a very lovely flowering plant. Each flower is about the size of one of the Achimenes grandiflora, quite flat, and a beautiful bright pink with a dark eye.—[It has been long in bloom with us, and appears likely to continue all the summer.—Conductor.]

Epacris miniata.—This species we figured in our Magazine a year or two back. It is a very handsome plant, blooming most profusely. It is not so robust as E. grandiflora, a much neater shrub.

The flowers are a bright rosy-scarlet, with very pure distinct white tips. It ought to be in every collection.

Epacris pulchella.—The plant is four feet high and as much across, and its long spikes of lovely white flowers, produced in vast profusion, render it peculiarly handsome.

Epacris lævigata.—The flowers are pure white, large, bell-shaped, and borne in profusion. It is a very fine species, highly ornamental, and ought to adorn every collection.

Zichya villosa.—The plant densely covered a cylindrical wire frame six feet high, and was in profuse bloom. Its lovely flowers of bright scarlet wings, purple keel, and yellow eye, rendered it a very interesting and handsome ornament. Every collection ought to have this species.

Daviesia latifolia.—This is a neat and lovely plant, its pea-formed deep golden dark-eyed flowers, produced in profusion, renders it a desirable one for every greenhouse.

Bossiæ virgata.—This is another neat and handsome pea-flowered plant; it blooms most abundantly. The flowers have bright yellow wings with a rich crimson keel, and are very beautiful. It ought to be grown in every greenhouse.

Epacris mucronata.—The flowers are pure white, and borne in abundance. It is a very beautiful species.

Epacris pulchella miniata.—A very neat variety; the flowers are white and pretty. It is an interesting plant.

Epacris paludosa.—The flowers are of a pure white, large, bell-shaped, and produced very profusely. It is a very handsome species, well deserving to be in every greenhouse.

Chorozema elegans.—The flowers are large, and expand quite flat, very rich orange-red wings with a deep purple keel, borne in great profusion in fine heads. The plant is of medium growth. It is far the handsomest kind we have seen, and deserves to be in every greenhouse, being so very ornamental.

Eutaxia myrtifolia.—A fine plant of it, in most profuse bloom, and its neat pea-formed flowers in such abundance, rendered it highly beautiful.

CHINESE GARDENING.

The Fa-tee Gardens, near Canton, have long been celebrated for their beauty by English residents. Mr. Fortune, the collector sent out to China by the Horticultural Society of London, in a very interesting book which he has just written,* speaks of them thus:—"Here, then, I beheld a specimen of the far-famed system of Chinese gardening, about which we have read so much in European authors; I will, therefore, describe them somewhat fully. The plants are principally kept in large pots, arranged in rows along the sides of narrow paved walks, with the houses of the gardeners at the entrance, through which the visitors pass to the gardens. There are about a dozen of these gardens, more or less extensive, according to the business or wealth of the proprietor; but they are generally smaller than the smallest of our London nurseries. They have also stock grounds, where the different plants are planted out in the ground, and where the first process of dwarfing their celebrated trees is put in operation. These contain large collections of Camellias, Azaleas, Oranges, Roses, and various other well-known plants, which are purchased by the Chinese when in flower. The most striking plant in autumn or winter is the curious fingered Citron, which the Chinese gather and place in their dwellings or on their altars. It is much admired, both for its strange form and also for its perfume. The Mandarin Orange is also much grown at Fa-tee, where the plants are kept in a dwarf state, and flower and fruit most profusely, producing large, flat, dark, red-skinned fruit. The Chinese have a great variety of plants belonging to the Orange tribe; and of one, which they call the Cum quat—a small oval-fruited variety—they make a most excellent preserve. The Murraya exotica, Aglaia odorata, Ixoras, and Lagerstrœmias are very ornamental here in autumn.

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* "Three Years' Wanderings in the Northern Provinces of China." By Robert Fortune. 8vo. Murray, London, 1847.

"But it is of course in spring that the Fa-tee gardens possess the greatest attractions; they are then gay with the Tree Pæony, Azaleas, Camellias, Roses, and various other plants. The Azaleas are splendid, and reminded me of the exhibition in the gardens of the Horticultural Society at Chiswick, but the Fa-tee exhibitions were on a much larger scale. Every garden was one mass of bloom, and the different colours of red, white, and purple blended together, had a most beautiful and imposing effect. The principal kinds grown were Azalea indica, indica alba, phœnicea, lateritia, variegata, and the yellow Azalea sinensis. I may mention, in passing, that I found the latter plant wild on the Ning-po hills, so that there is no doubt of its being a genuine Chinese species. The air at this season around Fa-tee is perfumed with the sweet flowers of Olea fragrans and the Magnolia fuscata, both of which are grown extensively in these gardens. Dwarf trees, as may be supposed, occupy a principal station; they are trained into the most grotesque and curious forms. The plants which stand next to dwarf trees in importance with the Chinese are certainly Chrysanthemums, which they manage extremely well, perhaps better than they do any other plant. So high do these plants stand in the favour of the Chinese gardener, that he will cultivate them extensively, even against the wishes of his employer; and, in many instances, rather leave his situation than give up the growth of his favourite flower. I was told that the late Mr. Beale used to say that he grew Chrysanthemums in his garden for no other purpose than to please his gardener, not having any taste for this particular flower himself.

"Tree Pæonies are not natives of the South of China, but are brought down in large quantities every year, about the month of January, from the northern provinces. They flower soon after they arrive, and are rapidly brought up by the Chinese to ornament their houses, after which they are thrown away, as they do not thrive well so far south as Canton or Macao, and will not flower a second season. They are sold according to the number of flower-buds they may have upon them, many of them fetching rather high prices."

The flora of the northern provinces, Mr. Fortune remarks, is very different from those of the south:—"Almost all the species of a tropical character having entirely disappeared, and in their places we find others related to those found in temperate climates in other parts of the world. I here met, for the first time, the beautiful Glycine sinensis, wild on the hills, where it climbs among the hedges and on trees, and its flowering branches hang in graceful festoons by the sides of the narrow roads which lead over the mountains. The Ficus nitida, so common around all the houses and temples in the south, is here unknown; and many of those beautiful flowering genera which are only found on the tops of the mountains in the south have here chosen less exalted situations; I allude more particularly to the Azaleas, which abound on the hill sides of this island. Most people have seen and admired the beautiful Azaleas which are brought to the Chiswick fêtes, and which, as individual specimens, surpass in most instances those which grow and bloom on their native hills; but few can form any idea of the gorgeous and striking beauty of these Azalea-clad mountains, where, on every side, as far as our vision extends, the eye rests on masses of flowers of dazzling brightness and surpassing beauty. Nor is it the Azalea alone which claims our admiration; Clematises, wild Roses, Honeysuckles, the Glycine, noticed above, and a hundred others, mingle their flowers with them, and make us confess that China is indeed the 'central flowery land.'"

The fondness of the Chinese for dwarfed plants is well known; their mode of preparing such objects is explained with more appearance of truth than we find in any previous account; and Mr. Fortune thus illustrates the passion for them which exists among all ranks of society:—

"When I was travelling on the hills of Hong-kong, a few days after my first arrival in China, I met with a most curious dwarf Lycopodium, which I dug up and carried down to Messrs. Dent's garden, where my other plants were at the time. 'Hai-yah,' said the old compradore, when he saw it, and was quite in raptures of delight. All the other coolies and servants gathered round the basket to admire this curious little plant. I had not seen them evince so much gratification since I showed them 'the old man Cactus' (Cereus senilis), which I took out from England, and presented to a Chinese nurseryman at Canton. On asking them why they prized the Lycopodium so much, they replied, in Canton English, 'Oh, he too muchia handsome; he grow only a leete and a leete every year: and suppose he be 100 year oula, he only so high,' holding up their hands an inch or two higher than the plant."

TO DESTROY THE THRIP.

TAKE a peck and a half of soot, and put it into a hogshead of soft water, keeping it well stirred every day for ten days or a fortnight. This is strained through a fine sieve or piece of canvas into a tub containing a peck of charcoal, and two or three lumps, or about three pounds of quick lime dropped in; in about two days it is strained again, and is then clear to syringe plants with. It will not only extirpate thrip, but many other troublesome insects, and is a good liquor for syringing with, as it induces general vigour and healthiness among plants.

TROPÆOLUM LOBBIANUM.

To those who cultivate plants for floral display during the winter months, this Tropæolum may be regarded as a plant of the greatest importance, whether the easy mode of its cultivation, the great beauty of its flowers, the peculiarity of their structure, or the prodigality with which they are produced, be taken into consideration; they form, too, an article of some use as an ingredient for mixing into, or ornamenting a dressed salad. Last midsummer a cutting was taken from a plant growing on a verandah in the open air, where it failed to produce its flowers; it was struck in a cold frame, and shifted and pinched in the usual way until it reached a 12-inch pot and covered a pyramidical trellis some four feet high; it was then placed in a cool stove, where the night heat seldom exceeded 60°, when it began to flower in the early part of December, and continued a dense mass for upwards of four months, forming a striking contrast to the Orchids and other plants then in a state of hybernation.

SPIRÆA PRUNIFOLIA,

WITH DOUBLE FLOWERS.

This charming shrub was introduced into Europe by Dr. Siebold, to whom our collections are indebted for so many novelties, only to be procured with the utmost difficulty. It deserves the attention of all amateurs, as well for its hardiness as its elegant habit and beautiful flowers. The Dutch traveller found it cultivated in the Japanese gardens, and supposes its native country to be Corea, or the north of China. It is a shrub of from six to nine feet high, and has upright, close, bushy, slender branches, which are covered with a smooth, ash-coloured bark, that detaches itself at a later period in thin scales. The leaves are oval, or ovate-elliptic, rounded at their base, obtuse or a little acute at their apex, downy beneath, denticulated at the edge. The flowers, which grow by threes or sixes, cover the whole length of the branches, are as white as snow, and very double, in consequence of a complete abortion of their stamens. Their shape is exactly like that of the Ranunculus aconitifolius, with double flowers, and their number and arrangement, together with a light and elegant bright green foliage, render this plant a charming addition to the shrubs which grow in the open air.

ON THE WIRE WORM.

Having seen many inquiries respecting the manner in which the wire-worm might be destroyed, induces me to send you my method of treatment for their destruction. For nearly two or three seasons I had nearly all my Dahlia plants destroyed by these destructive pests, the wire-worm. After having tried various experiments, that of burnt earth succeeded entirely to my satisfaction, not having a plant the following season injured. Thinking this might prove beneficial to numbers of your readers, if you think it worth insertion, it is at your service. The burnt earth may be made by burning the refuse of the garden in dry weather.

ON THE BOUVARDIA TRIPHYLLA.

BY CLERICUS.

About the middle of April I collect all my plants together from the places where they have been kept through the dormant season,—some among my orange tubs, some in cold frames, and others under the stage of the green-house. I turn them all out of their pots, shaking the soil from their roots, and trim off most of the large roots, yet retain as many of the fine fibrous ones as possible. At the same time I cut down all the shoots of the former year, leaving only two, three, or four eyes on each, according to the strength and age of the plants, and take care neither to over-pot them nor to cramp the roots by confinement. When I have got all potted and watered, in order to settle the earth about their roots, I place them in a cold frame, which I cover with hay and mats at night. I keep the light close during the night, and even in the day, unless the sun is very strong upon them, till they begin to grow, when I give them portions of air according to the weather and their advance in growth. Subsequently I leave the lights off through the day, and at last do not put them on at night. About a week after they have been thus exposed, I plant them out finally for the season either in clumps by themselves, or distributed among other plants, where they are seen in fine bloom till autumn. As soon as I apprehend frost, I take up the plants with balls of earth attached to the roots, and place them carefully in pots with good mellow soil. When they are replaced in pots and watered, those which are in luxuriant blossom I mix among the greenhouse plants, where they make a magnificent appearance till January. I continue to adopt this treatment, and it may be pursued for many years; for the application of fresh soil, the trimming of the old roots, and the great luxuriance gained by growing in summer in the open ground, renovate the plants, which could not be done by any other means of culture. I propagate Bouvardias by cuttings of the roots, as the thick old roots annually cut away under the treatment here detailed afford the means of propagating the plants to an unlimited extent.

GREEN MOSS ON ROSE TREES AND OTHER SHRUBBERY PLANTS.

Many readers of the Cabinet must have observed in their walks through a shrubbery the unsightly appearance of the stems and trunks of rose-bushes and larger shrubs, being entirely destitute of bark. Is it a natural disease incident to old trees? I am inclined to think that this is not the case, for I have seen comparatively young trees covered as much as the old ones. It will be observed that trees on rocks, on walls, on soil, and, in fact, on everything that is exposed to the action of the atmosphere in a fixed state, have a green covering, which, when minutely examined, appear like a green powder, and, if allowed to remain, would form into patches of moss. This seems to be the most minute of the vegetable creation, and I believe the very foundation of it, and but for the industry of man this would be the clothing that

Nature would assume in this moist climate. The particles of this green powder must be exceedingly minute, as it remains invisible until great masses are collected together: now it is obvious where this adheres to a tree it must close up its pores, and thereby prevent the vessels from being acted upon by the external air. I, likewise, think it receives nourishment by exhausting the sap in the bark, which will first begin to crack, and afterwards die and fall off. I am the more induced to form this opinion by having seen an experiment tried to destroy it: this was done by using the common solution of soft soap and sulphur-vivum mixed with boiling lime-water till it became of the consistence of paint. This, when cold, was applied with a paint-brush to part off the branches of a young tree that were covered with this green mould, yet the bark was free from cracks. The bark of the part thus dressed became in a short time clear and entirely free, whilst the remainder of the tree was still clothed with its green garb. I would recommend all gardeners, who have trees or shrubs in this condition, to give them a dressing once or twice in the winter season, and I doubt not that it will answer their highest expectations. A sprinkling of quick lime in a powdered state over the affected parts, after a shower of rain or strong dew, I have found to be equally useful wherever it touched.

ON RAISING PLANTS OF THE PINUS TRIBE FROM SEED.

BY A COUNTRY SQUIRE.

THIS beautiful tribe of trees has now become very popular, and their introduction into our pleasure-grounds, parks, &c., are much extending, and as cones of seed are now-a-days liberally given, even of the rarest and finest species, I am induced to send some observations on raising plants therefrom, &c.

Mr. Gordon gave some excellent observations upon this subject, which were inserted in the "Gardeners' Chronicle" five or six years back, and which mode of procedure I duly attended to, and have proved to be very successful. I therefore make an extract from the same, to which I add other observations, and respectfully solicit their insertion in an early Number of your MAGAZINE, and which I hope will in some degree contribute to promote a still greater extension of planting and ornamenting around our habitations with these very admirable (generally evergreen) trees.

"The Pine and Fir tribe are increased by seeds, which are produced in great abundance when the plants attain a certain age, and which are generally ripe in the autumn, the cones taking from fifteen to eighteen months before they come to maturity. The cones should be gathered at the beginning of winter; they should be placed in some cool but dry place until the end of March, at which time the seeds should be taken out of the cones, which in some cases is difficult without injuring them, particularly if they are kiln dried, as the seeds are easily damaged by fire-heat. The cones of some kinds are so hard—of Oocarpa, for example—that it would take weeks on the kiln before they would open. The safest way is to bore a hole through the centre, beginning at the base, or stalk end, and afterwards to drive a round piece of hard wood through the hole, which will split the cone; then with a chisel to commence taking off the scales in layers, beginning at the base of the cone. The seeds may then be removed without injury; this, of course, only applies to the more rare ones, all the others are easily opened by drying, and particularly the Silver, Spruce, and Balm of Gilead Firs; the Cedar, Weymouth, Larch, and Scotch Pine, also part with their seeds freely.

"The next operation is that of sowing the seeds, which is best done in the following manner:—If the kinds are new or rare, they should be sown in pans filled with dry, sandy loam, and without any mixture of either peat, leaf-mould, or rotten dung, all of which are injurious, and cause the young plants to damp off when they first come up, more especially if it should be damp weather at the time they appear above ground. If the loam is a little stiff, a small portion of sand may be used; but this must be avoided as much as possible, because the more sand there is in the soil the weaker the plants come up. If they are in a doubtful condition, sow the seeds in pans filled with very dry loam, and place them in some dry situation, out of the reach of damp, they will then not be injured; whereas, if they were not placed in dry soil, they would be sure to perish, or if sown in damp soil the like destruction would attend them. When spring advances, place the pans in gentle, but by no means in a damp heat, taking care, however, to remove them to a much cooler place before the young plants are fairly above ground, and afterwards harden them off by degrees, giving them but little water at first; for much depends upon the use made of water at this period, and the treatment given to them when in this state (that is, when the young plant has exhausted the nourishment supplied by the seed, and has to seek subsistence from its own roots), after which there is little danger of their damping off, except they are over-watered. When the plants are fairly up, and a little hardened, they may be potted off singly into small pots, filled with a mixture of loam and sandy peat; if the loam is rather poor or stiff, a little leaf-mould may be added, for the bad effects of the two latter substances seem only to occur during the time the young plant receives its support from the seed. When potted, they should be placed in a close pit or frame for a few days, until they recover the effects of the shift, and afterwards air must be freely admitted, but water given rather sparingly at first. They will require little trouble afterwards, but probably may want shifting into larger pots in the autumn (particularly the strong-growing kinds) as it is injurious to their future growth to allow their roots to get pot-bound when young. The more rare or tender kinds should not be planted out before the third season, but the commoner ones may be planted out after the first year.

"All those kinds with hard-shelled seeds, and even the Deodar and Cedar of Lebanon, may be sown in the open border with great advantage in the following manner: select a good fresh loamy soil which is not stiff, but rather sandy, and about the end of March dig and break the surface rather finely; then mark the ground out into beds about four feet wide, leaving an alley of a foot wide between each bed; and on some fine dry day sow the seeds broadcast rather thickly, covering them over from a quarter to half an inch deep, according to the size of the seeds; then smooth the surface by gently beating it with the back of the spade (this must only be done if the soil is dry and rather light). They will then require no other care, except keeping them from weeds and the attacks of birds, mice, and slugs, which are very destructive to them when they first make their appearance above ground. By placing some small branches thickly over the beds until the young plants have thrown off the old seed-coat, they may be protected from the ravages of birds; if attacked by mice, traps must be set for catching them, as the only safe mode of preventing such pests: and if subject to be eaten by slugs, some wood-ashes should be sown over the beds, just as the young plants are making their appearance.

"The seeds of the greater part of the Pine tribe come up in about six weeks after sowing in the open border, and the most of them will be fit for transplanting into nursery rows the first year after sowing; afterwards they may be treated in the same way as other forest trees."

THE CULTURE OF LEONOTIS LEONURUS.

BY A NOBLEMAN'S FLOWER GARDENER.

This plant is one of the most beautiful and showy plants that can adorn the greenhouse and conservatory from September to January, and it only requires to be seen, when properly grown, to attract the attention of all admirers of fine flowers. It can be had cheap where it is found in a nursery establishment.

By the following mode of treatment I have it bloom splendidly, and its Lion's Tail fine orange-scarlet spikes of flowers produce an enchanting effect.

At the beginning of March, plants of Leonotis struck from cuttings last summer begin to grow; they are then shifted into 32 pots, filled with a good loamy soil, with plenty of drainage, consisting of chopped turf and well-rotted manure in lumps, about equal parts. The plants are placed in a light part of the greenhouse, where they get plenty of air, and have but little water for the first two or three weeks, after which they are set in pans, but do not stand constantly in water. By the 1st of May they are shifted into the pots they are intended to flower in, No. 4's, about the middle of the month, when all danger from frost is over. I plunge the pots up to the rim in a south border, and supply them plentifully with water; and once in eight or ten days give them some liquid manure. They require nothing else but tying up and occasionally turning the pots round to prevent the roots from running into the border till the end of September, when they are removed into the greenhouse, where they flower for eight or ten weeks; after this they are cut down and put under the greenhouse stage, and kept nearly dry till the following growing season.

VISIT TO SOUTH AMERICA IN SEARCH OF NEW PLANTS.*

MR. PURDIE was sent out as a collector of plants for the Royal Gardens of Kew; and, as we have previously remarked, has sent many very interesting, beautiful, and valuable plants to the Gardens. The many communications from Mr. Purdie to Sir W. J. Hooker are of a very interesting character, so much so, that Sir William has commenced their insertion in the "Botanical Magazine" for the present year, and thereby add to the usefulness of that excellent work. The following is an extract from the letter inserted in the April Number:—

"*Rio de la Hacha, December* 14, 1844.

"I fear that the four boxes of Orchideæ and one of seeds, which were to leave Santa Martha by the November or December packet, may have arrived in England at a time of frost; so that I am very anxious to secure more of the same plants; which I shall get in the interior. Among the very fine species are a Schomburghkia, a splendid Limodorum, and a very singular and uncommon Maxillaria. I have never seen the latter in full bloom, but judging from its strong habit and still stronger flower-stems, I expect it will prove a remarkable thing; these I hope to procure in a day or two, from the Sierras of Maracaybo. The remainder of the road, 300 miles, lies through a savannah country, and will afford the seeds of some fine Palms. I expect the distance will occupy about eighteen days. I shall pack up here the plants collected on this side of the Nivada, to be shipped by the first conveyance to Santa Martha, whence they will be despatched, so as to reach England early in April, when there will be no risk of frost. Among other plants gathered on this side of the Nivada, is a magnificent Oncidium, ranking among the most conspicuous of that noble tribe: its bright yellow flowers are slightly striped in the centre with scarlet, and as large (which you will see by the specimens) as those of O. Papilio; the habit of the species is strictly trailing, like a Manettia. I have some fears about getting this plant to England alive, its pseudo-bulbs being so delicate. I found it climbing over mossy trees, to their topmost branches, on the river San Antonio, at an elevation of about 8000 feet. There is also a showy and fragrant plant, like Catasetum, but a distinct genus.

"The ascent of this slope of the Nivada has afforded me many more plants than did the other side, by way of San Sebastian. The vegetation is generally stronger and finer. After ascending 2000 feet, I came to a gigantic forest of Laurus Persea (Avocado pear), strewing the ground with its delicious fruits, and the luxuriant foliage affording an impenetrable shade: there were also a few scattered Palms; the slender and graceful Chamædorea gracilis was particularly abundant, producing pendant clusters of golden fruit, which imparted a lively aspect to the otherwise sombre wilderness. This mixture of trees continued till about 4000 feet of elevation; where Palms become more predominant, blending with the less noble but more delicate and beautiful tree-ferns. There was nothing, however, new to me in this vegetation. Higher still, at 5000 feet, comes the Podocarpus, with some Myrtaceous trees, Melastomæ and the stately Wax-Palm, the only Palm that is found at such an elevation. Hence, till shrubs cease (at about 11,000 feet) the beautiful Befarias (the Rhododendrons of South America) and other ericoid shrubs, with some suffruticose Syngenesia and a few conspicuous Melastomaceæ, compose the principal vegetation. The last plant of any size seen near the snow, is a robust Syngenesia, which is esteemed highly medicinal; here and there grew also patches of a showy Lupine, some kinds of Geranium, and in swampy spots an Osmunda, several Carices, and a striking Pinguicula, reminding me of our P. grandiflora, with foliage of the same glistening and icy-cold nature. The plants that vegetated highest up were a conspicuous species of Alypium, and, along the margin of perpetual snow, a Primula, which I should have much liked to gather in bloom. Many other plants were seen upon the Sierra, but not in sufficient abundance to form any feature in the landscape. I found in rocky spots a striking Echeveria; a neat, but not conspicuous Daphne; one species of Fuchsia, and two of Berberis, with a strong and rather rare Passion-flower, a Tropæolum, several Ardisiæ, an Ilex, and a Cratægus, &c.

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* Correspondence from Mr. Purdie, collector of new plants in South America for the Royal Gardens of Kew, published monthly in the *Botanical Magazine*.

"On my return hither two days ago, I received your and Mr. Smith's letters, announcing the arrival of my first box of plants from Santa Martha; sorry I am that some of the contents had perished. I am now convinced that it is a faulty plan to pack Orchideæ (finally) shortly after they are gathered; which I did with all my Jamaica plants, and with the box in question from Santa Martha. I have observed that after carrying plants in open airy baskets for a week or two, the oldest bulbs of the Orchideæ commonly perish: thus it must be advisable to ascertain their state before sending them away. When I arrived at Rio de la Hacha, I found, in the four boxes just despatched, that there was a full bushel of dead and broken rubbish: if this had been allowed to remain in consequence of the packages having been closed, it must have destroyed many more plants; and to a similar process of unexamined decay, I attribute my previous failures.

"I am anxious to hear how the roots of Achimenes have borne the journey, in order that I may yet secure more if desirable; for I know of a station where three species grow, on the mountains above Santa Martha, one of which I believe is not in cultivation. Every inquiry has been made, since I came into Columbia, with a view to obtaining intelligence of the Palo de Vacca (Cow-tree), but I can hear nothing of it. The Phytelephas (Vegetable Ivory Palm) is procurable at Santa Martha, the nuts being brought from the province of Maraquita; but I am not so sure of their freshness: therefore, in the absence of further directions from you about my movements, I think of ascending the Magdalena, and myself collecting growing plants and seeds of the Ivory Palm. If time allows, I shall make an excursion to the mountains in that district, and return to Santa Martha about the middle or end of March. I have much to do there, and mean to make the best possible use of my opportunities, and to bring with me all the plants I can."

MAMMILLARIA PULCHRA TREATED AS AN AQUATIC.

Having ascertained that Cacti grown without fresh air succeed best in a moist state, I felt desirous of knowing the result, were a plant exposed to the change of temperature of a greenhouse, and always kept in water. In 1845, on the 11th of June, a plant of M. pulchra, in a three-inch pot, was placed in a six-inch pot (not repotted), which, having the hole at the bottom stopped up, has been kept full of water; and, strange as it may appear to some, the plant is still growing luxuriantly. Among most Cacti growers, it is a general rule to keep such plants quite dry during winter; and even in summer some persons are afraid to give more water than just moistens the surface of the soil. This single experiment, however, seems to show that the nature of Cacti is as yet but imperfectly understood.—*Mr. Donald, in Journal of Horticultural Society.*

EXHIBITION OF AMERICAN PLANTS.

We have been much gratified by the inspection of a superb collection of these plants, which have recently been exhibited in the King's-road, Chelsea, by Mr. H. Waterer, of the Knap-hill Nursery. Under a large canvass roof is formed a temporary garden in three compartments, with turf-margined gravel walks and some thousands of American plants, as fresh as if they were still growing in the pure air of Knap-hill, bearing evidence of how well even the most delicate plants may be transplanted if proper care is exercised in taking them up with large balls to the roots. The walks wind amongst the most magnificent Rhododendrons one can imagine, in a manner so as to form them into groups, here and there intermixed with Azaleas of many colours and the broad-leaved Kalmia. Besides the enormous mass of bloom, varying in the Rhododendron from purple to white, and comprising the orange and flame-coloured tints of the Azaleas, the delicate white blossoms of the Kalmia, the most prominent feature is the fine standard Rhododendrons, several of which are from ten to fourteen feet high, with clean stems from four to five feet in height, and large spreading heads bending down with the weight of bloom. Although these are perhaps the largest and most showy plants in the collection, there are many others, however, which nearly approaches them. We will not attempt to enumerate all the varieties of Rhododendron and Azaleas that are to be found here. We will, however, give the names of a few which appeared to us more particularly deserving of notice. Of Rhododendrons, multicolum maculatum is a white, prettily spotted with brown, of excellent habit; pictum also a white, prettily spotted with brownish-green; cœlestinum is a handsome delicate pink sort; catawbiense splendens, rosy pink, tinged with blue, heads compact and neat—one of the best; album grandiflorum, delicate blush, upper petals nicely spotted with green; roseum elegans, compact heads of rosy flowers, very pretty; album elegans, fine blush, spotted in the upper petals with yellow; Everestianum, a charming kind, with large dense heads of lilac blossoms, closely spotted in the upper petals with green, giving to the flower a pleasing variety of colour; and nivaticum, a good white. Of Azaleas, vescocephala is a good white; pontica transparens, a fine yellow; punicea, beautiful orange; pontica grandiflora, a fine large flowered variety; p. imperialis, orange red; p. conspicua, yellow, flowers large and fine; and Ne Plus Ultra, orange red, with yellow upper petals, a very profuse bloomer. These are a few and only a very few of the many excellent varieties collected together here; and for a better selection we would at once refer all who are within reach to inspect the collection itself, which we may add is now in all its beauty.

ON BLOOMING THE LARGE WHITE DATURA (BRUGMANSIA SUAVEOLENS) IN A VERY DWARF MANNER.

BY LUCY.

By the following mode of culture, I grow the noble fragrant-flowered Datura, as a very dwarf plant, and forward the particulars for insertion in the CABINET. Early in February, cuttings of the young wood, about three inches long, having an eye in each, are taken and potted in sixty-sized pots, placed in a hotbed frame of good temperature; they soon take root, which is easily ascertained by the roots protruding through the holes at the bottom of the pot. When this is discovered they are repotted into twenty-fours, using a compost of well-enriched loamy soil, one-half being leaf mould and rotten dung. The plants are kept in the frame for a few weeks, during which period they are supplied freely with liquid manure water. When the pot is pretty well filled with roots, the plants are repotted into those three sizes larger. At whatever height it is desired to have the plants, the top is pinched off, and laterals are produced. When in the frame a good moist heat is kept up by sprinkling and watering; this is necessary to prevent an attack of the red spider. When the plants cannot be kept longer, for height, in the frame, they are removed into the greenhouse and repotted when requisite, freely supplied with liquid manure, and syringed every evening with water, particularly at the under side of the foliage. The lateral shoots will produce a profusion of flowers at the height the lead was stopped, and continue in bloom for a long time.

By the above simple process I have plants from two to three feet high, having thirty or more fine flowers upon each; and certainly nothing can exceed their loveliness, and be more ornamental for the greenhouse or conservatory throughout the summer.

THE CULTURE OF POINSETTIA PULCHERRIMA.

BY MR. THORNE, GARDENER, FAIRFORD PARK, GLOUCESTERSHIRE.

ACCORDING to Loudon's "Hortus Britannicus," this plant was introduced into this country from Mexico in 1834; consequently it has been an inhabitant of our stoves for more than ten years. It is not so much cultivated as it deserves; it ought to be in every collection. It forms a valuable plant during the dull months of winter and early spring, at which time the plant unfolds its scarlet-like leaves, forming a beautiful contrast with the dark green foliage underneath. I have found it extremely difficult to preserve the leaves in a perfect state until the flowers have duly expanded. The plant, however, succeeds best in the warmest and driest part of the stove during winter; for, if subjected to a cold damp atmosphere, failure will certainly ensue, and the foliage turn yellow. To grow it to perfection, it ought to receive the treatment of a dry stove plant, where it will flourish in all its beauty. In my opinion the neatest specimens are formed when struck three in a pot, and grown in a dwarf manner, which is easily done by inducing side branches. If properly cultivated in a high temperature, as above stated, the plants will flower freely the first season, and form a perfect blaze of bloom on the top of each. I generally destroy the plants after two years of age, as they are liable to become unsightly, unless much labour were bestowed on them. When the blossoms are decaying I prune in the wood rather closely and place the plants in a moist high temperature, to induce growth at the earliest period so as to be able to increase young stocks for another season's supply. The cuttings strike freely in leaf mould, adding to it a small portion of silver sand. I generally insert three in a two-inch pot, and place them under a hand-light in a shady part of the stove. The beauty of the plant most amply repays for every attention given to it.

ON FUCHSIA BLOOMS NOT EXPANDING.

IN ANSWER TO MR. FYFFE.

BY DAHL OF MANCHESTER.

Every admirer of the Fuchsia must sympathise with your correspondent, Mr. A. Fyffe, and his friends in their misfortunes with this fine flower. Before I say one word more, I would call their attention to a paper in the January Number of the present year, page 9, on Vegetable Physiology, by Mr. Todd, which contains some excellent remarks; and again to another paper, by Senex, in the April Number, page 79, on the sap of plants. From these papers may be gathered the idea of the component parts of plants. Thus having arrived at their correct composition, the next step he must take is, to carry out a proper plan of cultivation. Mr. F. owns, "that in the city of Edinburgh he has not all the advantages that other situations admit;" but says, "his plants are freely furnished with flower buds." For his situation, I think in this he is fortunate; and, thus fortunate, I think a little more attention will set him right. He must be aware that plants confined to a room will not develope all their fine qualities as those that have every advantage; he will find a line in the paper of Senex, to the effect, "That if the sap of plants be examined in its most simple state, it will be found to consist of water, mucilage, and sugar." It is allowed that plants give out perspiration, and as the juices of the plant is excited to a certain degree when forcing its blooms, it may be considered that the dry atmosphere of a room may cause that glutinous matter of which he complains, and that his misfortunes may in some measure arise therefrom; but no doubt there are other causes; the accumulation of crude excrescences about the roots may, to a degree, accelerate it, from the want of proper drainage; want of proper attention to watering will cause it. But I find I am going to too great a length, and will conclude by giving the plan which I pursue, with success, to my satisfaction. I take it for granted, that the air of Edinburgh is as pure and as congenial for the growth of plants as it is at Manchester. I grow my plants in rooms, not having a greenhouse; I have some fine sorts; I let them rest in the winter. In frosty weather I lay them on their sides, and cover with a mat: at the proper time I repot them, in light rich stuff, with plenty of drainage, and put them in the windows of the rooms. As the foliage proceeds to grow, I give them all the air I can, and water with manure water, sometimes Guano water, and sometimes dung water. At the beginning of the season the foliage is watered with rain water twice a week; as the season advances this watering of the foliage, blooms and all, is done every day; and my Fuchsias please me well: this keeps them perfectly clean, and the absorption that takes place proves beneficial to the plant, increasing its vigour, and gives it strength to perfect its blooms and keeps it longer in that state to give satisfaction. I think that if Mr. F. and his friends will pursue this plan their misfortunes will be at an end.

NEW HOLLAND SEEDS.

BY LETETIA.

Recently I have received a quantity of seeds from New Holland, of different species and sizes, when, and how am I to sow them, &c.?

[Sow them early in February: a convenient plan to adopt is to take shallow pots, about six inches across, well drain them, and fill to within about an inch of the top with fine soil, consisting of peat and loam, the latter preponderating, both tolerably dry, and with enough sand intermixed to make the mixture appear sandy; this should be gently pressed smooth, and marked into four divisions; a portion of each packet of seed, properly labelled, is then to be sown either in one or in two of these divisions, according to the quantity, selecting seeds of nearly equal size to be sown in the same pot, in order that the same depth of covering may be proper for all; the labels should be placed close together in the centre, exactly facing the division in which the corresponding seeds are sown; the pots should be placed in a mild hot bed, and the soil covered and shaded so as to prevent its drying, by using a little clean moss or something equally effectual; the least quantity of water that will suffice to keep the soil from getting dry, will be found most desirable, and the covering and shading will in great measure prevent the dryness; avoid steam, by frequently airing the frame; and when the seedlings are fairly up, transplant them into small pots, or prick them into larger ones, as may be convenient. In all cases be careful to preserve correctly whatever memorandums there may be, especially those referring to the native locality whence the seeds were imported.]

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

ALL kinds of Roses (excepting the China and its varieties) may now be budded. Leave a small portion of wood with every bud, or, this dry season especially, the buds will shrivel, without much attention, both to watering at the roots, moistening the bud by sprinkling water over it, shading the same, &c. Securing the bud with worsted is better than matting. The following mode has been adopted with very great success. "The bud for insertion is taken off the shoot very close to the eye; the tip or part of the bark below the bud is cut off quite close, to allow the bud to be pushed closer into the stock without being bruised. It then requires only to be tied above the bud, and a composition applied to exclude the air and keep the bud cool, consisting of two-thirds cow-dung and one-third stiff loam. The bud requires no untying, and gradually grows so closely into the stock, as hardly to be distinguished from a shoot, and is not so likely to be blown out or injured. The composition is applied in a liquid state." Chrysanthemums should have the leads pinched off, in order to induce laterals to push, so the plants may be dwarfer, and have bushy heads; this must be done as early as possible. Propagate by means of slips, parting of the plants, &c., any double flowered, and other desirable fibrous rooted perennial plants done flowering. Cut off the stems of Double Rockets, in order to induce them to push forth side shoots, which will furnish plants for dividing. Transplant into nursery beds, or into borders, seedling perennial or biennial plants sown in spring. Seeds of all kinds of bulbous-rooted and tuberous-rooted plants should be sown in pans or boxes, such as Cyclamens, Anemonies, Ranunculuses, Hyacinths, &c. Take up any bulbs of Ranunculuses, &c. remaining in the beds whose foliage is decayed. Plant out, too, any autumn flowering bulbs. Auriculas and Polyanthuses should be cleared of their dead leaves, have offsets taken off, and the plants be re-potted; also pot off seedlings. Heartsease should be increased, putting them in a shady border. Verbenas should be increased by putting off cuttings, potting runners, &c., so that they may be well established before the winter season commences. The plants in beds, borders, &c., will require a good watering at the roots with soft pond-water twice or three times a week, if the season continues dry; so with most other bedded plants, as Scarlet Pelargoniums, &c. Seeds of Pansies, and any of the early blooming annuals, should be gathered as soon as they appear mature; the Pansy should be gathered before the husk breaks, or the seeds will suddenly be widely scattered. Pinks already planted out in beds should be watered, shaded, &c.; beds of them may still be made. See articles in former Numbers.

Layers of Carnations and Picotees when well rooted should be potted off. The bulbs of Tulips should have the loose coats dressed off. Wallflower slips should be put off early. Where there are abundance of suitable short shoots of the plants employed for beds, as Geraniums, Heliotropes, Calceolarias, Anagallis, Double Ragwort, Salvias, Hemimeris, Bouvardias, &c., they should be put off and struck, after which they can be kept in a coolish situation, till the usual period of winter protection. Thus early prepared, it is done with less attention, and the plants being well rooted, endure the winter better. Dahlias must have the laterals thinned out, so that the principal stems stand free. When flowers are required large in proportion, thin away the buds, water abundantly, mulch over the roots, &c. What is termed the Black Aphis fly has attacked the Dahlia this season most ravenously. The best remedy is to brush them off daily, and water over the tops at the evening. If the shoots be bent into a strong infusion of chamomile water, we find it embitters the tender foliage, that the insects do not attack them afterwards. Sow Mignonette for blooming in winter; and seeds of Brachycome iberidifolia now sown, and the plants potted singly in small sixties, will survive through winter protected from frost, and be highly ornamental for the greenhouse, sitting room, &c. the next year.

IN THE GREENHOUSE, &c.

PELARGONIUMS.—Plants that have done blooming, and the young wood has been a little hardened by a free admission of air, should now be headed down, if intended for the next season's blooming. Being now headed down, they soon push fresh shoots; and as there generally are many more than is necessary to retain for the proper formation of the plants, they should be thinned when about an inch long. When the shoots retained are about two inches long, repot the plants by shaking off nearly all the old compost, and then replace with new. These plants form the finest specimens for exhibition, &c. the following year. (See excellent Articles on the entire culture, by Mr. Cock, Mr. Catleugh, and other celebrated growers, in former Volumes of our Magazine.) As early as possible put off cuttings to strike, for a supply of young plants for next year.

Camellias may now be re-potted. I consider it an excellent plan; perform this operation the moment that the flower-bud is decidedly formed. As compost, I would recommend two-thirds of fibrous loam of an unctuous character, and one-third of fibrous heath soil. The more fibrous and lumpy it is the better, and a good sprinkling of charcoal in small masses, with sharp silver sand, should be added. Let the pots be most completely drained, by placing some large crocks in a very hollow position at the bottom; topping these up with a pounded mixture of broken crocks and charcoal, from which all the very small particles have been riddled. Cover this with very fibrous turf in small lumps, before placing the ball, and keep pressing the material (not ramming) close, with the fingers, during the process of filling up, observing to have the compost in a mellow state, rather inclining to dryness. One most material point is, to see that the ball is thoroughly moistened before shifting; if any doubt of this exist, let the ball be steeped in water for a quarter of an hour previous to potting. When the flower-buds are in clusters thin them, so as to leave no more than are likely to be perfected. If too many remain they injure the plant, and eventually drop off in spring.

Calceolarias that have done blooming should have the stems cut down, then place the plants in a cool frame, and shade from hot sun. In about ten days re-pot them. (See Article in July Number, 1846.)

The very hot and dry weather will be favourable for the Red Spider upon many of the new Holland plants, as Chorozemas, &c., also Thunbergias, &c.: to prevent them, occasionally place the plant so as it can be forcibly syringed at the under side of the leaves, and if strong soapsuds are used, the better; as such a composition leaves a glutinous matter. If a plant be infested, syringe it, and whilst wet turn it over and dust it under the leaves with common sulphur. A good syringing of the plants three times a week is highly beneficial to the entire stock, avoiding the flowers, and performing it at the evening. Well water the ground where the plants stand, that is, between the pots.

Leschenaultias, Pimeleas, Baronias, Polygalas, and similar plants, done blooming, should now be cut, in order to have the plants brought into a proper bushy form, after which place them in a situation where they can be shaded from hot sun, to cause them to push fresh shoots. If young stock be required of any kinds of greenhouse plants, and there be young wood sufficiently ripened, cuttings should immediately be inserted, as the season is getting to a close for success this year. Re-pot specimen plants of the above-named kinds as early as possible after they begin to push: this prepares for next season's success.

Cinerarias required for blooming in autumn and the early part of winter should be immediately potted and duly forwarded.

ON CALLA ÆTHIOPICA.

BY CLERICUS.

NOTICING that a correspondent has lately inquired how the Calla Æthiopica is to be treated, in order to bloom it satisfactorily: I have two plants in my greenhouse which meet my expectations, by treating it as follows:—I grow it in a good rich turfy loam, a good drainage, and in the growing season give it a liberal supply of soft water. The winter season I allow it to rest, and only keep it barely moist; at the end of February I commence watering gradually, and place the plant where it gets an increase of warmth. As soon as I perceive the slightest move in growth, I take the plant out of the pot, keeping the ball as entire as I can, then remove by the hand carefully the exterior part of the soil, avoiding injuring the roots. This being done, I repot it, and as the extremity of the roots will just be pushing, they soon extend in the fresh compost, and by due attention afterwards a vigorous bloom is obtained.

FLORICULTURAL CABINET

SEPTEMBER, 1847.

ILLUSTRATIONS.

EDMONDS'S JENNY LIND PICOTEE.

THIS very beautiful Picotee was raised by George Edmonds, Esq., of Brooklands, Wandsworth-road, London, by whom it was exhibited at the recent floral shows held at the Horticultural Society's grounds, Chiswick; the Botanic Garden, Regent's Park; the Royal South London, Slough, &c., and where, by all lovers of this esteemed class of flowers who saw it, it was universally admired, and pronounced to be of the very finest quality. The white is not quite as pure as in some other kinds, but the form is excellent, petals free from notch, edging more true than any other we ever saw, not a single spot upon the ground, but entirely pure. It well merits a place in every collection.

We had the pleasure of attending the exhibitions above named, and we never saw Carnations and Picotees shown to greater advantage; the flowers were in a state of perfection and vigour far beyond any precedent, and a corresponding interest was excited in the visitors. We inspected them very minutely, in order to obtain a select list of the best, and the following are the Picotees we can confidently recommend to our readers as being of first-rate merit, viz., Edmonds's Jenny Lind, Edmonds's Victoria Regina, Edmonds's Earnest, Burroughes's Mrs. Bevan, Burroughes's Amy, Barnard's Mrs. Barnard, Green's Queen Victoria, Wildman's Isabella, Willmer's Princess Royal, Sharpe's L'Elegant, Princess Alice, Juliet, Jessop's Sir W. Middleton, Lady Chesterfield, Duke of Newcastle, Miss Bevan, Norman's Beauty, Barnard's Borderer, Mathew's Ne Plus Ultra, Richard Cobden, Sharpe's Gem, Ely's Lady Ely.

Several of our latest volumes of this Magazine contain very excellent communications on the culture of this tribe of flowers by most of the celebrated growers and successful exhibitors, as Messrs. Norman, Ward, Ibbett, Wood of the Coppice near Nottingham, W. Harrison of

Felton, Ely, and several others, and we respectfully refer our readers to those articles. Most of the flowers exhibited by the Woolwich florists were of an extraordinary size. If these results be the effect of some new application in culture by manures, &c., such is the well-known liberality of our friends we refer to, we are confident they will gladly communicate it to us for the benefit of our readers.

The assemblage of these flowers shown in and around London during the present season has been very considerable, and much beyond what most of our readers have an idea of. It would have afforded us pleasure to record the names of the noble host of most worthy exhibitors, and annexed to each the list of flowers shown, but our limits forbid. As, however, the sorts shown at one or two of the principal exhibitions contain the best general kinds, and are nearly a repetition of the others, we here append the particulars, so that our readers may see what are the kinds most successful, and be aided in making selections now the layers are about being potted off, and offered for sale by the florists around London, Woolwich, Bedford, Cradley, Rothwell, as our advertising sheets from time to time testify.

THE HORTICULTURAL SOCIETY'S SHOW, Chiswick Gardens, July 17.

Amateur Growers.—Picotees, in pans of 24 distinct Varieties: Large Silver Medal.—To G. Edmonds, Esq., Wandsworth-road, for Wildman's Isabella, Mathews's Ne Plus Ultra, Burroughes's Mrs. Bevan, Willmer's Princess Royal, Edmonds's Prince of Wales, Robinson's Hero of Nottingham, Jessop's Sir William Middleton, Edmonds's Regina, Barraud's Borderer, Ely's Favourite, Green's Queen, Brinklow's Lady Chesterfield, Sharpe's Elegant, Edmonds's Mrs. Reeves, Barnard's Mrs. Barnard, Giddin's Sir Robert Peel, Crask's Prince Albert, Burroughes's Duke of Newcastle, Ely's Mrs. Lilly, Mathews's Enchantress, Dickson's Lady Jane Grey, Countess of Winterton, Crask's Queen, and Seedling.

Large Knightian Medal.—To John Edwards, Esq., Holloway, for Giddin's Masterpiece, Sharpe's L'Elegant, Mrs. Bevan, Coronation, Isabella, Ne Plus Ultra, Princess Augusta, Lady Flower, Willmer's Prince Royal, Seedling, John Hampden, Trito, Fair Phyllis, Teaser, Duke of Newcastle, John's Prince Albert, Ely's Favourite, Seedling, Burroughes's Emma, Burroughes's President, Charles Stanford, Seedling, Mathews's Enchantress,.and Nottingham Hero.

Small Bronze Medal.—To Mr. Ellis, Woolwich, for Ne Plus Ultra, Lord Althorp, Wood's Ophelia, Mrs. Bevan, Joan of Arc, Sharpe's Agitator, Sir Robert Peel, Sharpe's Elegant, Miss Desborough, Ely's Emperor, Crask's Queen, Sharpe's Beauty, Wilson's Fanny Irby, Ely's Mrs. Lilly, Giddin's Teaser, Ely's Favourite, Nottingham Hero, Miss Willoughby, Isabella, Crask's Prince Albert, President, Giddin's Vespasian, Duke of Newcastle, and Mrs. Honner.

Nurserymen.—Large Silver Medal.—To Messrs. Norman of Woolwich, for Willmer's Prince Royal, Headley's Criterion, Burroughes's Mrs. Bevan, Burroughes's Hermione, Burroughes's General Jackson, Burroughes's Princess Helena, Burroughes's King John, Burroughes's Emma, Sharpe's Agitator, Princess Augusta, Dickson's Mr. Trahar, Duke of Newcastle, Barraud's Bride, Mathews's Enchantress, Miss

Desborough, Norwich Rival, Lady Dacre, Dickson's Trip to Cambridge, Sharpe's Elegant, Crask's Queen, Sharpe's Beauty, Barnard's Mrs. Barnard, Headley's Venus, and Norman's Beauty.

Silver Knightian Medal.—To Mr. Turner, for Sharpe's Elegant, Æronaut, Andrè, Ne Plus Ultra, Garratt's Lady Dacre, Mrs. Bevan, May's Portia, Richard Cobden, Barnard's Mrs. Barnard, Nottingham Hero, Lady Sale, May's Juliet, Burroughes's Amy, Triumph, Sebastian, Wildman's Isabella, Duke of Newcastle, Jessica, Brinklow's Lady Chesterfield, Crask's Prince Albert, Seedling, Intrepid, Hudson's Unique, and Mathews's Enchantress.

Silver Banksian Medal.—To Mr. Keynes, Salisbury, for Sharpe's Agitator, Ne Plus Ultra, Trip to Cambridge, Dickson's Lady Jane Grey, Mrs. Bevan, Coronation, Wilson's Corregio, Trude's Victoria, Miss Jane, Trip to Oxford, Queen Victoria, Brinklow's Lady Chesterfield, La Delicate, Kirtland's Princess Augusta, Teaser, Prince Royal, Elegant, Seedling, Giddin's Vespasian, Wildman's Isabella, Crask's Prince Albert, John's Prince Albert, Sharpe's Gem, and Russell's Incomparable.

THE ROYAL SOUTH LONDON FLORICULTURAL SHOW, at the Surrey Zoological Gardens, July 21.

Amateur Growers.—The best Stand of twelve distinct Varieties of Picotees.—First Prize to G. Edmonds, Esq., Wandsworth-road, for Mrs. Bevan, Wildman's Isabella, Edmonds's Earnest, Miss Jane, Lady Douro, Barnard's Mrs. Barnard, Jessop's Sir William Middleton, Edmonds's Clara, Seedling, Field Marshal, Edmonds's Regina, and Jenny Lind.

Second Prize to Mr. Leach, for Mrs. Bevan, Agitator, Burroughes's Emma, L'Elegant, Enchantress, Lady Alice Peel, Norwich Rival, Dickson's Sophia, Isabella, Duke of Newcastle, Princess Royal, and Ne Plus Ultra.

Third Prize to John Edwards, Esq., for Lady Chesterfield, Mrs. Bevan, Elegant, Giddin's Teaser, Duke of Newcastle, Wildman's Isabella, President, Giddin's Vespasian, Sharpe's Wellington, Beauty, Princess Alice, Ely's Favourite.

Nurserymen.—The best Stand of twelve distinct Varieties of Picotees.—First Prize to Mr. Turner, for Sebastian, Lady Dacre, Mrs. Bevan, Enchantress, L'Elegant, Portia, Mrs. Barnard, Princess Royal, Isabella, Juliet, Prospero, and Burroughes's Amy.

Second Prize to Mr. Willmer, of Sunbury, for Sharpe's Elegant, Mrs. Bevan, Field Marshal, Giddin's Teaser, Princess Royal, Duke of Newcastle, Isabella, Grace Darling, Crask's Queen, Lady Dacre, Sharpe's Wellington, and Musson's Charlotte.

Third Prize to Mr. Norman, for Willmer's Princess Royal, Smith's Lord Hardinge, Mrs. Bevan, Sharpe's L'Elegant, Enchantress, King James, Crask's Queen, Ariel, Venus, Prewitt's Bendigo, Sylph, and General Jackson.

Seedlings.—Certificates of Merit were given for the following:—Norman's King John, a fine, heavy-edged, red flower, of good substance and full centre; Burroughes's Amy, a light-edged purple, large, good petal, and smooth edge; Willmer's Seedling, a heavy-edged purple, good form, and white pure.

Slough Show, July 27.

Amateurs.—For twelve dissimilar Blooms of Picotees.—First Prize to John Edwards, Esq., Holloway, for L'Elegant, Ely's Favourite, Mrs. Bevan, Burroughes's Lady Douro, Crask's Victoria, Willmer's Princess Royal, Lady A. Peel, Sharpe's Wellington, Wildman's Isabella, Mathews's Enchantress, Wood's Princess Alice, Mrs. Barnard.

Second Prize to G. Edmonds, Esq., Wandsworth-road, for Harry, Field Marshal, Miss Jane, Mrs. Bevan, Nottingham Hero, Green's Victoria, Mrs. Barnard, Willmer's Princess Royal, Wildman's Isabella, President, Tolworthy's Isabella, Regina.

Third Prize to Rev. A. Matthews, Weston-on-the-Green, Oxon, for Wildman's Isabella, Duke of Newcastle, Mrs. Bevan, Enchantress, Ne Plus Ultra, Lady A. Peel, Kirtland's Isabella, Cynthia, Willmer's Princess Royal, Wood's Princess Alice, Mrs. Barnard, Nulli Secundus.

Mr. Turner's Prize for the best six Blooms.—First Prize to G. Edmonds, Esq., for Edmonds's Clara, Earnest, Eliza, and Augusta, Miss Jane, Mrs. Barnard.

Classes open to all Growers: Twelve Blooms.—First Prize to Mr. C. Turner, Chalvey, for Mrs. Bevan, Unique, Coronation, Mrs. Barnard, Crask's Victoria, Wildman's Isabella, Burroughes's Princess Alice, Masterpiece, Green's Victoria, Lady Peel, Willmer's Princess Royal.

Second Prize to Mr. Willmer, Sunbury, for Nulli Secundus, Wildman's Isabella, Mrs. Barnard, Duchess of Cambridge, Sharp's Wellington, Lady Dacre, Green's Victoria, Cook's President, Willmer's Princess Royal, Ely's Field Marshal, Mrs. Bevan, Duke of Newcastle.

Third Prize to Mr. Keynes, Salisbury, for Wildman's Isabella, Mrs. Bevan, Mr. Annesley, Agitator, Cook's President, Sir W. Middleton, Willmer's Princess Royal, Criterion, L'Elegant, Burroughes's President, Mrs. Barnard, Pluperfect.

Mr. Trahar's Prize for the two best dissimilar Blooms.—First Prize to Mr. C. Turner, for Burroughes's Amy and Fellow's Gertrude.

Mr. Sharp's Prize for the best Heavy Purple.—First Prize to G. Edmonds, Esq., for Edmonds's Augusta.

Seedlings.—Mr. Gould's Prize for the best Seedling Picotee and a first-class Certificate was awarded to G. Edmonds, Esq., for Jenny Lind, light red, of the finest quality, marking remarkably true, good substance, medium size. First-class Certificates were also awarded to Mr. C. Turner, for Burroughes's Amy. This flower, although so highly spoken of before, improves on acquaintance; white good, with lively rosy purple lace, full of well-regulated petals. Rev. A. Mathews, for Eclipse, light purple, very full, good white, and substance; and M. May, Esq., Sonning, for Juliet, also light red, full flower, marking good, petals a little cupped, forming a fine crown.

NOTES ON NEW OR RARE PLANTS.

ABELIA FLORIBUNDA—COPIOUS FLOWERING.

Caprifoliaceæ. Didynamia Angiospermia. (Syn. *Vessalia floribunda.*)

In a former volume of the FLORICULTURAL CABINET we gave a figure of this very neat and beautiful flowering greenhouse plant. Since that time it has attracted much attention at the horticultural shows in and around London under other names, and sometimes corrupted into Russelia. In some of the Belgium gardens it is known under the name of Fuchsia, species from Mexico. It was discovered by Galeotti near Vera Cruz, upon one of the Mexican mountains, at an elevation of about ten thousand feet. It is a shrub growing from two to three feet high, branching. The flowers are tube formed, two inches long, of a bright purple-red colour. They are produced at the ends of the branches in clusters of three or four together, pendant. We find it bloom very freely, is handsome, and well deserves a place in the greenhouse. It can be procured cheap. (Figured in *Bot. Mag.*, 4316.)

SEEDLING CORRÆAS.

In former Numbers we have figured and noticed some handsome hybrids; since which time other beautiful seedlings have been raised. Mr. Gaines has produced several, distinct and pretty, which are figured in "Paxton's Magazine of Botany" for August, viz., BRILLIANT, a bright rosy-crimson; RUBRA, a dull red; COCCINEA, red, with green streaks and a green mouth; ROSEA-ALBA, delicate rose, with a white mouth, very neat; MAGNIFLORA, white, with a tinge of sulphur; VIRIDIFLORA-ALBA, tube white, with a bright green mouth, very pretty. The two following are also figured from seedlings in Messrs. Henderson's collection:—PULCHELLA, a rich orange-red, flower an inch long, somewhat bell-shaped, very pretty; DELICATA, lilac-pink, flower bell-shaped, very neat. They are a pretty addition to our winter flowers for the greenhouse, well deserving cultivation in every one.

CATTLEYA BULBOSA—THE BULBOUS.

Orchideæ. Gynandria Monandria.

This beautiful species is supposed to be a native of Brazil, and has recently bloomed in the collection of Mr. Rucker, at Wandsworth. The sepals and petals are of a beautiful lilac-pink; lip of a rich purple-crimson. Each flower is about three inches and a-half across. They do not rise above six inches from the parent-trailing stalk.

ÆSCHYNANTHUS SPECIOSUS—THE SHOWY.

Cyrtandraceæ. Didynamia Angiospermia.

Messrs. Veitch, of Exeter, exhibited this new and fine species at the Chiswick and Regent's Park shows the past season, where it was greatly admired, and deemed the most beautiful species hitherto exhibited. Messrs. Veitch's collector, Mr. Lobb, discovered it in Java, and transmitted seeds to them. It was found attached to the trunks of trees. It requires to be treated as tropical Orchideous plants. The stems grow about two feet long. The flowers are in terminal heads, of from ten to twenty in each. A single flower is nearly four inches long, the tube a rich orange, with the extremity (mouth), four-lobed, scarlet; a black line separates the two colours. It is a very desirable species, highly ornamental. (Figured in *Bot. Mag.*, 4320.)

GASTROLOBIUM VILLOSUM—SHAGGY GASTROLOBE.

Fabaceæ. Decandria Monogynia.

From the Swan River colony, where it was discovered by Mr. Drummond. It is a decumbent shrub, growing in muddy pebbly places, in woods on Darling's range of mountains. The flowers are borne profusely in terminal racemous spikes, orange, with a purplish-lilac keel. It flourishes in sandy loam, peat, and a liberal portion of silver sand. In winter to be kept in a greenhouse or cool pit frame, just protected from frost; if in the greenhouse in an airy place. In summer it should be out of doors in a situation that is cool and sheltered. Such a treatment, too, is suited to the Chorozema. It has bloomed at Mr. Low's, and is a very pretty plant for the greenhouse. (Figured in *Bot. Reg.*, 45.)

LIEBEGIA SPECIOSA—THE SHOWY.

Cyrtandraceæ. Didynamia Angiospermia.

Sent to Messrs. Veitch, from Java, by Mr. Lobb. The stem rises two feet high. The flowers are produced from the axils of a few of the terminal pairs of leaves; they are in peduncles of six or eight in each, and the end of the shoot finishes in a panicle of them. Each flower is tube-shaped, with a five parted mouth, about two inches long, of a pale yellowish white, tinged with a rich violet at the upper side of the tube. The mouth of the flower is an inch across. In appearance much like a long flower of Chirita sinensis. It is a showy species, highly ornamental. (Figured in *Bot. Mag.*, 4315.)

LONICERA DISCOLOR—STAINED FLY HONEYSUCKLE.

This new species has recently been introduced into this country from India through the East India Company, by whom seeds were presented to the Horticultural Society, and is growing in the Chiswick Garden. It is a fine deciduous shrub, hardy, blooming in June; the flowers are very small, a greenish yellow. In September and October it has a profusion of deep black berries, about the size of a large black currant, which produce an interesting appearance. (Figured in *Bot. Reg.*, 44.)

PASSIFLORA KERMESINA—Var. LEMICHEZIANA.

A very handsome variety, raised by M. Lemichez, a nurseryman at Paris. It differs from the species in being a deep crimson, and the segments of the crown purple, mottled with white. It is a very desirable plant for the conservatory. It has bloomed at Messrs. Rollisson's, of Tooting Nursery. (Figured in *Pax. Mag. Bot.*)

PENTSTEMON GORDONI—MR. GORDON'S.

Mr. Gordon collected seeds of this beautiful species in the valley of the Platte River, on the east side of the Rocky Mountains, a portion of which were given to Edward Leeds, Esq., of Manchester, who raised plants, which have bloomed. In many respects it approaches the beautiful P. speciosum. The plant grows to half a yard high, branching. The flowers are produced in many-flowered peduncles, which form a long panicle, producing a pretty appearance. Each flower is about an inch and a-half long, having a broad five-parted reflexed mouth, a rich blue, with a tinge of purple along the tube. It well deserves to be in every flower garden. (Figured in *Bot. Mag.*, 4319.)

SALVIA LEUCANTHA—WHITE-FLOWERED.

It is a native of Mexico, and was introduced into this country by Lady Smirke, of Great Stanmore, in Middlesex, in whose greenhouse collection it has bloomed. The plant grows to about two feet high, branching. The leaves are narrow, three inches long. The flowers are white, produced in long spikes, and are borne in whorls of six to eight flowers in each. A separate blossom is about three-quarters of an inch long. (Figured in *Bot. Mag.*, 4318.)

VIBERNUM MACROCEPHALUM—LARGE-HEADED GUELDER ROSE.

Mr. Fortune sent this noble-flowered species from China to the Horticultural Society, having found it in Chusan and at Shanghae. He speaks of it thus: "This noble species was also found in the gardens of the rich in the north of China, and will probably prove quite hardy in England. There is a tree of it in a garden on the island of Chusan at least twenty feet high, which in the month of May every year is covered with its snow-white blossoms. When grafted it blooms on small plants in pots, and is like a white Hydrangea, by which name it is known amongst the Chinese." It is certainly one of the finest hardy shrubs ever introduced. The heads are pyramidal, eight inches each way, and a separate blossom near two inches across. (Figured in *Bot. Reg.*, 43.)

PELARGONIUMS.

The show Pelargoniums exhibited at the late meetings held at Chiswick Gardens, Regent's Park, and the Surrey Zoological Gardens, comprised the greatest number of superb sorts ever before brought together, and they were managed, in exhibiting, &c., far more satisfactorily and natural; the very objectionable porcupine surface of sticks, and unnatural disposal of the branches, were almost uniformly dispensed with, and which received the cordial approval of the visitors.

The Seedlings of 1846, and those of the present year blooming, contained several of first-rate excellence in form and substance; but in some instances there was not sufficient distinction from other varieties in colours and marking.

A new race, however, is coming forward in what is termed the FANCY KINDS, which, being gay and beautiful, are much admired, and become very general favourites; they are in great request, certainly claim special attention, and will give a beautiful variety to the collections of Pelargoniums, and we doubt not but the fancy class will soon comprise an equal perfection in form and substance with the present general existing show flowers.

We do not need to give the entire lists of what each person exhibited in his collection; they varied but little; we shall, therefore, insert a few of the best, by which our readers may be aided in making selections of the most approved sorts.

At CHISWICK, June 19th, the display was very superb, and comprised admirable collections.

Amateur Class.—First Prize to Mr. Whomes, gardener to E. Foster, Esq., of Clewer House. The sorts were, Orion, Ariel, Lucretia, Pericles, Clarinda, Jenny Lind, Marion, Minerva, Armida, Ondine, Bertha, and Ardens.—Mr. Cock, of Chiswick, obtained the second Prize for Isabella, Duchess of Leinster, Sylvia, Hector, Zenobia, President, Rosetta, Minerva, and Miss Halford.—Third Prize to Mr. Robinson, gardener to J. Simpson, Esq., who showed Juliet, Duke of Wellington, Sarah, Duke of Cornwall, Magog, Sunrise, Dido, Erectum, Rosy Circle, Orion, Matilda, and Aurora.—Fourth Prize to Mr. Coysh, gardener to R. Hudson, Esq., for Oberon, Nina, Cleopatra, Nabob, Meteor, Champion, Beauty of Clapham, Sunrise, Lady Sale, Rosy Circle, and Matilda.—Fifth Prize to Mr. Stains, for Hebe's Lip, Orion, Desdemona, Camilla, Aurora, Bianca, Sirius, Isabella, Rosy Circle, Pearl, Vesuvius, and Duchess of Leinster.—In the same class, for *Nurserymen*, Mr. Dobson, gardener to Mr. Beck, obtained the first Prize. His collection contained Competitor, Centurion, Blanche, Emilie, Aurora, Cassandra, Princess, Desdemona, Pacha, Cavalier, Rosamond, and Hebe's Lip.—Mr. Gaines, of Battersea, received the second Prize for Lady Bulkeley, Lady Kitty, King of Saxony, Eximia, Orion, Princess, Hector, Model, Attractor, Salamander, Aladdin, and Shield of Achilles.—For collections of twelve specimens grown in 11-inch pots, the first Prize, in the Amateurs' Class, was awarded to Mr. Parker, gardener to J. H. Oughton, Esq., for Roulette, Adonis, Rainbow, Hesperus, Enchantress, Flora, Duke of Cornwall, Matilda, Emma, Duchess of Leinster, Hector, and Superba. The second Prize, in the same class, was given to Mr. Goulding, gardener to T. Turner, Esq.; and the third to Mr. Higgins, gardener to E. Saunders, Esq.—In the Nurserymen's Class, the first Prize was awarded to Mr. Gaines, Battersea, for Witch, Cotherstone, Emma, Floridum, Lady Sale, Queen of Bourbons, Pirate, Miss Holford, Alba grandiflora, Princess, Lady Prudhoe, and Henrietta.—The Prize of 7*l.* offered by "Philo" for the best six seedlings, not sent out, two years old, and by any raiser, excited much expectation; but strange as it may read, but two competitors appeared to contest the prize, Mr. Whomes and Mr. Dobson. The prize was awarded to Mr. Dobson for Honora, Cavalier, Grandiflora, Centurion, Cardinal, and Gulielma. To the other collection, which contained some fine specimens, by an oversight the names were not attached.—The little fancy Pelargoniums excited much attention; their gay and lively appearance make them general favourites. Two collections were entered for competition: first, from Mr. Gaines, who exhibited Queen Victoria, Anais, Ibrahim Pacha, Sidonia, Lady Rivers, and Maid of Anjou; the second from Mr. Ambrose, who showed Lady Flora, John improved, Lady Rivers, Queen Victoria, La Belle Africaine, and Yeatmannia grandiflora.

SEEDLINGS.

Madame Grisi (Fancy Class), the upper petals a rich velvet maroon; the lower ones are a similar colour, with a lighter margin, and one-third of the base of each petal is pure white, which forms a strikingly distinct eye. It is very handsome, and a charming variety.

Picta (Fancy), a light flower, with fine rose spot on the upper petals, in the way of Queen Victoria.

Madame Julian (Fancy), a light flower, also in the way of Queen Victoria.

Jenny Lind (Fancy). This is in the way of Anais, which has upper petals a rich rosy crimson, margined with white, and a purple blotch in the centre of each; the lower petals same colour, with a broader white margin, and a light centre.

Curiosa, in the way of Anais too.

Orpheus, Ambrose's, (Fancy), a dark-feathered flower, very fine and handsome.

Jehu improved (Fancy), a very dark crimson velvet, distinct and handsome.

Yeatmanniana grandiflora, an improvement on the old variety, a salmon rose, with white.

Ibraham Pacha (Fancy), in the way of Anais, but not equal to it.

Crusader (Hoyle's), a rich brilliant red, with very dark blotch on each of the upper petals; a very superb variety, of first-rate quality.

Christabel, a ruby-pink, with a very distinct white centre; first-rate.

Flamingo, a ruby-red, with very dark blotch on upper petals; first-rate.

Belle of the Village, ruby-crimson.

Superlative, a deep flesh colour, with rich crimson spots on upper petals; first-rate.

Brilliant (Topping's), a bright scarlet-red, and first-rate.

Salamander (Gaines's), a bright red, and superb flower; first-rate.

Clown (Dobson's), pink, with a very distinct crimson spot upon each of the lower petals, centre of flower white; pretty.

Mr. Whomes, gardener to E. Foster, Esq., exhibited Orion, Ariel, Lucretia, Pericles, Ondine, Marion, pink, with very clear white centre; these were of first-rate excellence in form, substance, and colours. Clarinda, Minerva, and Bertha are very fine second-rate flowers. Armida and Ardens, good.

Centurion (Dobson's), rose, with a dark spot on each of the lower petals; very handsome.

Cavalier, a rich red; very good.

Cruenta, a smooth red; very good.

Delicatissima and Dorcas (Beck's), both very good varieties.

Avenger (Thurtell's), a very first-rate flower.

Pretender (Thurtell's), also first-rate.

King of the Purples (Gaines's), first-rate.

Favonius, Honora, and Gulielma, seedlings of 1846, by Mr. Beck, of good quality, but the first named is the best; it has rosy-crimson upper petals, with dark spot on each; lower petals salmon, with a deeper spot on each.

Ann (Beck's), upper petals rose, with large dark spot; lower ones rose, light centre; good.

Aurora (Beck's), upper petals dark, lower ones rosy-crimson; good.

Acheron (Beck's), a rosy-crimson; good.

Grandis (Miller's), a good bright rose.

Rosa (Miller's), a beautiful rose-coloured flower.

CUPHEA PLATYCENTRA AND CUPHEA STRIGULOSA.

The former of these neat and beautiful flowering plants is shrubby, with foliage much like a Bouvardia triphylla, and the trumpet-shaped flowers in form similar to those of the Bouvardia, of a brilliant orange-scarlet, tipped with dark outside the revolving mouth of the tube, and inside of the same pure white; the contrast in the colours is very strikingly pretty. A separate blossom is an inch long, or, in some cases, a little more. They are produced in abundance, singly, from the axils of the leaves.

The other species is also shrubby, of a similar form of foliage, and the flowers are about the same size; they are produced in one-sided long racemes, hanging in vast profusion, in a drooping manner. They are of a pale orange on the upper side of the tube, and yellow underneath; the mouth is tipped with bright green. Both kinds flower abundantly, and are most interesting plants for the open borders in summer, each specially useful for an entire bed. The plants are easily propagated, and readily formed to any desired size for pots or beds, and flourish admirably alike in the stove, greenhouse, or open air, and in-doors may be kept in bloom the entire year. They form handsome plants for the edging of a bed, as they can be kept, at a few inches high, in profuse bloom. Plants for out of doors should be excited in-doors for a few weeks before turning out, and the last ten days or a fortnight be gradually inured, so that a sudden exposure out of doors in May be avoided. Good-sized bushy plants should be prepared to turn out, and the show will amply repay for any attention, and continue to bloom till destroyed by frost. The plants thus turned out can be very safely taken up at the approach of winter, re-potted, and then be placed in the stove, greenhouse, or sitting-room, and by due attention will display their pretty blooms the entire winter and spring. We have had the plants in bloom in the open beds, &c., for a length of time this season, and in-doors ever since the early part of 1846. It flourishes in pots in a compost formed of equal portions of loam and sandy peat, along with about a quarter of leaf soil and bits of charcoal. Cuttings strike readily; and for next season's out-door bedding, should be provided the present autumn.

TORENIA ASIATICA.

We planted out a bed in the open air of this very beautiful flowering plant, which has grown admirably and bloomed most charmingly.

The plant spreads around, making a carpet of it, and its numerous rich blue flowers, with their dark velvet large spots, produce an admirable effect. Good plants, gradually inured previously, turned out at the end of May, will realize every expectation. It is readily propagated, and very easy of culture; a sandy loam and peat soil, with a free drainage when in pots, suits it well. A succession of young plants should be occasionally provided in summer, as casualties, by watering, sometimes occur, and they suddenly die off. Keep the stem from being in a hollow, as stagnant water retained there is injurious.

New Hardy Plants from China.

Mr. Fortune has discovered and introduced two most valuable Roses. Of them he says: —

"The gardens of the Mandarins, although small, were extremely gay, particularly during the early months of the year; and what was of more importance to me, contained a number of new plants of great beauty and interest. On entering one of the gardens, on a fine morning in May, I was struck with a mass of yellow flowers which completely covered a distant part of the wall; the colour was not a common yellow, but had something of buff in it, which gave the flowers a striking and uncommon appearance. I immediately ran up to the place, and, to my surprise and delight, found I had discovered a most beautiful new yellow climbing Rose. I have no doubt, from what I afterwards learned, that this Rose is from the more northern districts of the Chinese empire, and will prove perfectly hardy in Europe.

"Another Rose, which the Chinese call the Five-coloured, was found in one of these gardens at this time; it belongs to the section commonly called China Roses in this country, but sports in a very beautiful and strange manner. Sometimes it produces self-coloured blooms, being either red or French white, and frequently having flowers of both on one plant at the same time; while at other times the flowers are striped with the colours already mentioned. This will also be as hardy as our common China Rose."

He further mentions that he discovered a white variety of the beautiful Glycine Sinensis, which, if equally hardy with the blue one already introduced, will make a valuable addition to our climbers.

BLUE-FLOWERED HYDRANGEAS.

BY W. A., AN AMATEUR, ST. JOHN'S WOOD, LONDON.

I have been a subscriber to your very useful Magazine from the commencement to the present time, and have read therein many different methods described in order to produce blue-flowered Hydrangeas. Some of them are very complicated; but being anxious to succeed, I tried nearly every one, but did not accomplish my object in a single instance.

The present summer I watered several young plants (some before the flower buds opened, and others when in bloom) with a very strong liquid manure, made solely of cow-dung, being steeped in water for a few hours. After pouring some of the liquid upon the soil, I filled the saucers in which the pots stood.

The plants which were in bloom when I began to apply it to them changed to a beautiful lilac, and those in bud when commencing are now in bloom of a fine lilac-blue; the heads are very large and superb. By this simple process the change takes place so immediate, that any person desirous can evidence the effects.

CULTURE OF THE CHINESE PRIMROSE.

Although this may be easily and successfully cultivated in pots, yet it is more easily and advantageously cultivated in general by planting it out in some shady situation during the summer months. For autumn-flowering specimens the seed should be sown about the middle of March, in pots or pans, and placed in a little heat until the young plants appear, when they should be removed to a greenhouse. As soon as they are large enough let them be pricked out into pots or pans, keeping them in a shady part of the house. They will thus, with a little attention, be strong plants, ready for planting out by the end of May. Prepare a frame under a north wall (the most suitable situation for them) with a compost of three-parts leaf mould and a little turfy loam or sand. Let the plants be placed about six or eight inches apart; keep them close for a few days, after which the covering should be removed entirely, to allow the dews and rains to fall on them. They will require no more attention until the time arrives for potting, but they should have a liberal supply of water and liquid manure occasionally. The bed specimens should, of course, be removed as they come into flower, in order to give the others more room to grow. About the middle of September they should be taken up and potted in six, seven, or eight-inch pots, according to the object of the cultivator; afterwards replace them in the frame, keeping them close for a few days, and constantly wetting the foliage three or four times a-day to keep them from flagging. In about a fortnight they may safely be removed to the greenhouse, and watered more sparingly as they come into flower. You will thus insure a good succession of bloom throughout the autumn. Seed for specimens to flower in spring should be sown about the middle of April, and treated as above, keeping them free from damp and frost during the winter months, and giving them more water as the spring advances, which is all that is required to make them flower abundantly. After the plants have done blooming, plant them out again as before, and they will make fine specimens for flowering in the following autumn.—*Gardeners' Chronicle.*

PLANTS IN POTS.

If in the gardener's vocabulary there is one expression more anomalous than another—alike calculated to mislead the professional tyro and the amateur—it is that simple combination of words which theorists are for ever writing, and practical men are for ever talking about —*proper compost*. Opinions, both practical and theoretical, so widely differ, as to what constitutes a proper soil for any particular plant, or genera of plants, that, after listening to the various verbal descriptions of some, and searching the analytical and chemical combinations laid down by others, one is constrained to arrive at the rather uncomfortable fact that nobody seems to understand what a proper soil consists of. Now, this arises from the fact, that the word proper, which sounds so like, and is so often used as a *definite* term, should, in this case, be considered as indefinite, and that simply from the fact that the same end may be arrived at equally certain by different routes, and all equally deserving the appellation *proper;* or, in other words, that a plant may be successfully grown in a great diversity of soil; all, and each of which may, with propriety, be considered *proper* soil. One person grows a particular plant in some particular soil, to greater perfection than in any other. Another person arrives at a like result, in a soil widely different in many respects; yet, each considers the soil he employs as the only proper one; and, thus, to the end of the chapter. Every one knows that all cultivated plants (excepting, of course, Epiphytal orchideæ), are divided, as far as soil is concerned, into two classes, the one requiring rich vegetable mould, usually designated loam, to which is added various decomposing vegetable matters; the other requiring heath soil, such as is found in abundance where even the Calluna vulgaris flourishes. From these simple individual substances, a soil in which any plant will flourish may be constituted. Provided there is nothing in a soil which we employ actually deleterious to vegetable life, it matters very little what the chemical combinations may be. When you read an elaborate analysis of what a soil ought to consist, treat such with all the respect due to the scientific skill evinced, but treat it as a theory in your operations, not as a practical guide And when some votary of a particular genus of beauties, dilates with rapture on the minutiæ of his weighing and measuring, in the combination of his compost, do not damp his ardour by telling him how much easier he might have arrived at a like conclusion. In all cases employ a *fibrous* soil, suitable in character to the class of plants you are operating on, of course modifying its richness to the results anticipated; and do not so much attend to its chemical combination, as to its mechanical texture.

OBSERVATIONS ON BRITISH PLANTS, &c.

BY JUVENIS.

I READ in your Number of the present month (July), page 168, "We ardently hope that what we have written may bring many of our wildings a step nearer our homes, and that the attention of our readers may be employed at the present delightful period of the year in collecting such plants as may suit their tastes and localities." Under this feeling, some time ago I wrote to you, strongly advocating extra attention by the florist and scientific gardener, to our early-blooming, wild, and humble companion of our youthful and more aged walks, the brilliant Dent-de-leon; but to my second application you required to know if I was in earnest. Yes! as earnest as I ever was in my life;

and my feelings and wishes were in exact accordance to views in the foregoing article of yours. I had seen the great effect produced by the culture of the wild and humble pansey, and I felt a wish for professional persons, one of which I am not, to exert their skill upon this humble wayfaring flower that expands its brilliant star-like form to our sight in spring's earliest dawn; whilst a similar flower, of not so much beauty and delicacy of form, the Corchorus Japonica, is protected and sheltered against our walls and dwellings.

There are a number of our wild flowers which would well repay the florist's pains, " the wherewithal and appliances to boot." Cannot the cowslip, and its congener the modest primrose, be made to extend their blooming period? The small pink crane's bill, with its pleasing foliage, would grace a parterre as well as the dusty footpath side. There is the Lychnis sylvestris, both varieties having neat and elegant flowers; and why should they not participate in the civilization of cultivation? and who more proper in the floricultural world than yourself, to take some of these denizens of the " wilds and wastes" under your care and protection?

[On all occasions we have much pleasure in meeting the wishes of our correspondents; but in consequence of our respected friend having, on the occasion he refers to, only recommended the Dandelion, and selecting it in preference to so many common, but very beautiful flowering British plants, we did suspect the motive. We are glad that now a more general recommendation has been communicated, and we respectfully solicit his further assistance. Dandelion and other plants, whose seeds are transmitted so readily in the air, even to remote places, should not be allowed to perfect seeds, but the heads be removed as soon as the blossom fades.—CONDUCTOR.]

OBSERVATIONS ON THE COWSLIP AND PRIMROSE.

BY A BRITON.

I HAVE been much delighted with the insertion of descriptive remarks upon our native (or what are termed British) plants in some of the recent Numbers of the CABINET, and I feel obliged for Mr. Johnstone commencing the subject. In order to assist the object, I forward the following particulars, extracted from the "Phytologist," a botanical journal published by Mr. John Voorst, Paternoster-row, London, which is well worth procuring.

"THE COWSLIP AND PRIMROSE.

" While the botanists of this country were still imperfectly acquainted with the true Primula elatior (of Jacquin), and were applying that name to varieties of the Primula vulgaris, I called the attention of the Botanical Society to one of those varieties which differed from the ordinary form of P. vulgaris, not only by having the umbel of flowers raised above the leaves on an elongated scape (a variation of character not rare in P. vulgaris), but also by approaching nearer towards P. veris in the size and colour of its flowers, the pubescence, and other characters. This is the variety which is entered in the London Catalogue, under the name of Primula vulgaris, *var.* intermedia, and which has been alluded to in the pages of the 'Phytologist' on different occasions (Phytol. i. pp. 9, 232, 1002), under the name of the 'Claygate Oxlip.' It has also been distributed by the Botanical Society, under the name of 'Oxlip, No. 2,' in contrast with other forms of Primulæ which are designated 'Oxlips' also.

"A wild root of this Claygate Oxlip was removed to my garden in the spring of 1841. Neither in that year, nor during the three succeeding years, did I observe any seedlings about the plant. In the summer of 1843, I saved some of the seed, all from the one plant, in order to ascertain whether it would germinate. This seed was sown in a flower-pot, in the spring of 1844, and kept well watered. Numerous plants thus raised, were removed to the open ground in the autumn of 1844. On the 2nd of May, 1845, there were eighty-eight of these plants alive, seventy of them then being in flower. Several were in no wise distinguishable from the common primrose; some few were perfect cowslips; the greater number being intermediate varieties, which might fairly be said to connect the cowslips and primroses, step by step, so gradually did these varieties pass one to the other. On throwing them into groups, to correspond with the arrangement given in the 'London Catalogue of British Plants,' I obtained the following numerical results:—

True Cowslips (Primula veris)	4
Cowslips passing to Oxlips (Primula veris, *var.* major)	5
Oxlips (P. vulgaris, *var.* intermedia) . . .	23
Caulescent Primroses (P. vulgaris, *var.* caulescens)	18
True Primroses (P. vulgaris)	20
Plants not bearing flowers	18
	88

"The Claygate Oxlip, the parent plant, was growing in my kitchen garden, in which neither cowslip nor primrose was grown in 1843. Nor was it easy to conceive the parent plant fertilized from either of the two species, unless through the agency of bees. Under the circumstances of the experiment, though not impossible, I think it highly improbable, that the seed of any other Primula than the one plant, could have been in the flower-pot. When the young plants were removed to the open ground, they were set in four different places, in order to try them in dissimilar soils and situations. Among those placed most in the shade there were no 'cowslips,' or 'cowslips passing to oxlips.' This circumstance might be attributable to the paucity of plants so placed: the cowslips bearing a small proportion among the plants placed more in the sun. The conclusion appears unavoidable to me, that a variety of the primrose gave origin at the same time to cowslips, to primroses, and to many varieties of these two reputed species. All the flowers had the colours of the wild cowslip or primrose, or intermediate tints; and in other respects, they kept to the characters of the wild plants, without sporting into the monstrosities of calyx or corolla, which are so frequently seen in the garden Primulæ.

"It will be observed of this experiment, that the first change from P. vulgaris was made (so to write) by the hand of Nature; the parent stock of my mixed assemblage having been a wild variety (as I suppose) of the primrose. In the experiment of the Rev. W. Herbert, somewhat similar results are said to have been produced by sowing the seeds of a 'red cowslip,'—query, an oxlip? In recording his own experiment, it is stated by the Rev. J. S. Henslow that he sowed the seeds of 'some cowslips' which were growing in his garden, and that these produced varieties intermediate between the cowslip and primrose, with one 'perfect primrose.' Remarkably enough, no cowslips appears to have been produced from the seeds sown by Mr. Henslow; and I cannot avoid a still lingering doubt whether the seeds may not inadvertently have been taken from plants of the oxlip or caulescent primrose, instead of the cowslip. Moreover, it is now desirable to ascertain whether the 'Westhoe' oxlips are not referrible to the Primula elatior of Jacquin, and equally so with the garden cowslips from which the seeds were collected. In the few following remarks, which naturally arise on these experiments, I assume the accuracy of my own experiment, as before reported; although a repetition of it is rendered desirable on account of the admitted possibility that a seed or seeds of another Primula could have been in the soil used in the flower-pot. But whence the connecting series of varieties in that case?

"According to the technical idea of a species, which makes it embrace all individual examples which have (or might have) descended from a common progenitor, all my plants—whether cowslips, primroses, or varieties of either—must belong to one single species; and thus we fall back upon the Linnæan notion of one 'Primula veris,' with its subordinate varieties of 'elatior' and 'acaulis.' This view will scarce find favour in the eyes of those botanists who labour under the 'species-splitting' monomania. The wild cowslip and primrose have well-marked characters for distinction, and characters which are usually very regular and constant. So far they are now dissimilar, and more constantly dissimilar, than are numerous pairs of 'book-species,' which are unhesitatingly received as really distinct in nature. Unite plants so dissimilar and so readily distinguished, as are the cowslip and primrose,—and what are we then to say about the frivolous attempts at species-making among the Rubi and Polygona in vogue at present, as among the Rosæ and Menthæ in former years?

"If we allow the cowslip and primrose to be two species, and yet allow that one can pass into the other, either directly or through the intermediate oxlip, we abandon the definition of species, as usually given, and fall into the transition-of-species theory, advocated in the 'Vestiges.'

"I do not see that we get more clear of the difficulty by assuming, without proof thereof, that the 'Claygate Oxlip' is a true example of hybridity. Do hybrids, if fertile, produce at once their own like, the like of each parent, and a progeny of intermediate likeness also? At best, the hybrid is only half of either species,—and can the half produce the whole? Such an event would assuredly not be 'like producing like' through an endless succession of descents.

"Let a few other cases be adduced, between reputed species equally dissimilar, and we shall be forced to recast our ideas and definition of the term 'species.' It would unavoidably become arbitrary and conventional; with no more exactness or constancy of application, than we can give to the terms 'genus' or 'order.' "

THE HEARTSEASE.

BY DAHL OF MANCHESTER.

THE first article in your June publication, on this most admired flower, I think is hardly so explicit as the subject demands. The Heartsease, though a native of Britain, was never cultivated in order to render it a florist's flower, till taken in hand by Mr. Thomson, of Iver, and by him was brought into admiration, and from his original stock have all the beautiful varieties in existence been produced; he is called in the west the Father of the Heartsease. At the time he was making these improvements I lived about four miles from his place, and often and great was the pleasure to go over his seed-beds, and watch his colony putting forth their beauties for future fame.

[In confirmation of these remarks, the reader may find extracts in this Magazine, in the Ninth Volume, 1844, October Number, page 222. It is there recorded, that in 1813 or 1814, Lord Gambier (whose gardener Mr. Thomson was) brought him a few plants collected in the fields near the mansion at Iver; they were the common yellow and white; and his lordship requested his gardener to cultivate them. Having done so, it was soon discovered that a great improvement was effected in the flowers; and this led to as many other sorts being collected as could be discovered in the neighbourhood. About four years after this commencement I had raised many seedlings from the originals; and one which took Lord Gambier's fancy was named Lady Gambier, another George the Fourth, a third was called Ajax. The first good shaped flower was named Thomson's King. Eventually the lovely Queen Victoria was produced, and from which, Mr. Thomson states, many more beautiful has proceeded—CONDUCTOR].

ON GROWING AND EXHIBITING THE PANSEY IN POTS.

BY MR. ALEXANDER FYFE, OF CHARLOTTE SQUARE, EDINBURGH.

I AM an ardent admirer and enthusiastic cultivator of that most interesting and favourite flower the Pansey. Now I am extremely desirous of seeing the time when premiums will be awarded for the best grown Pansies in pots, and for the plants to be exhibited for competition too in pots. I have examined the accounts of prizes, &c. at most of the floral shows in England and Scotland, and amongst all these I am sorry to have to say that there was not a premium for Pansies in pots. I do most earnestly entreat all those who cultivate this lovely plant, and whose intention is to exhibit, to use their exertions to procure the sanction of the society or societies of which they be members to offer prizes for them to be cultivated and exhibited in pots.

Is it not as essentially necessary that a plant be exhibited as a single flower? I think so. It is a well-known fact that plants are stimulated in an unnatural degree of growth and size by various chemical and other compositions; and the inevitable consequences are, the premature decay and death of the plants under such treatment. Now, it is my humble opinion, that if Pansies were to be exhibited for competition in pots, it would prevent, to some extent, the use of such injurious stimulants. Generally the plants so stimulated are the largest, but certainly not the handsomest, and, as such, they produce the largest bloom; but, then, if a prize be offered for the quality of the plants as well as the blooms, you would have the twofold benefit derived, by seeing a handsome plant and a compact bloom; it would offer more justice to the plants, and more encouragement to those who are anxious that the practice be put in immediate execution; and there are many such in this city and its neighbourhood, of whom I may especially mention Mr. Cobold, formerly President of the Ipswich Horticultural Society, now manager of the Edinburgh Zoological Gardens, and who was the originator of the formation, &c. of our own Horticultural Society. This gentleman is most zealous in endeavours to promote the plan I now plead for.

I have conversed with many persons on the subject, and found some difference in opinion as to the time when the competitions should take place; but when plants are grown in pots, they can readily be retarded or forwarded, as circumstances may dictate; this business of course would be regulated by the existing committee, as well as defining the size of the pots in which the plants are to be shown, &c. As the Pansey will admit of two opportunities of exhibition, I would suggest that at the spring show the pots be twenty-four sized, and the plants be young, and to have only one stem bearing blooms; that is to say, the plant to be from three to six inches high, and the side shoots not to be in bloom. The plants for the Autumn show I think should be the largest, having the greatest number of good blooms; and as the plant can be trained to any desired form, that should be one that would display the greatest surface of flowers; perhaps the conical shape would be preferable to any other; and a good sized plant in profuse bloom would be a very handsome object, and be highly attractive at any floral exhibitions, as well as display the perfection and real merits of the variety far beyond the system generally pursued when only a single flower is shown.

METROPOLITAN FLORAL EXHIBITIONS.

HORTICULTURAL SOCIETY, REGENT STREET.

July 6.—The subjects of exhibition on this occasion were not numerous, except those from the Society's garden; nevertheless, some very interesting things were produced. A Knightian Medal was awarded to Messrs. Loddiges, of Hackney, for a pretty large collection of Orchids, which comprised six species of Epidendrum, several Oncidiums, perhaps the most remarkable of which were two fine specimens of Lanceanum; also a Calanthe Masuca, with five spikes of beautiful deep violet blossoms; the rare Lacæna bicolor, producing a long pendulous spike of pale flowers; Ornithidium miniatum; Dendrobium aduncum; the curious Acanthophippium Javanicum, and various others.—Messrs. Veitch and Son, of Exeter, sent two forms of Hydrangea, nearly allied to Japonica; and cut specimens of Dendrobium aduncum, from Lower Siam; and a new, white-flowered Dendrobium, from Moulmein. Cut specimens of an Epidendrum; a Cyrtopodium, resembling C. Andersonii and Mr. Van Houtte's so-called Thunbergia fastuosa, were likewise contributed by Mr. Moore, gardener to R. Hanbury, Esq. The latter proves not to be a Thunbergia at all, but a Mikania—a twining, composite plant, with large, roundish, handsome leaves, and heads of little inconspicuous white flowers.—Mr. Cuthill, of Camberwell, sent Lisianthus Russellianus, a plant in whose culture he is so successful; Messrs. Chandler, of Vauxhall, a red flowered double Hippeastrum; and Mr. Eyre, gardener to R. W. Barchard, Esq., a collection of seedling Gloxinias.—Of Fruit, J. Luscombe, Esq., of Coombe Royal, Kingsbridge, sent a dish of well-swelled Shaddocks. They were stated to have been grown on a south wall, protected at night only by a reed screen. This result, however, be it remembered, was obtained in the fine climate of Devon. From the garden of the Society were various Orchids; Statice mucronata, a useful species; also S. sinuata and eximia; several species of Achimenes; an Angelonia, sent by Mr. Hartweg from Mexico, a nice dwarf kind, with beautiful deep violet blossoms; Aquilegia Skinneri, a Guatemala species remarkable for its green and red flowers, as well as for the country whence it comes; the useful Lyperia pinnatifida; and Deutzia scabra, the latter equally adapted for early forcing as for summer display; the Jasmine-like Solanum (S. jasminoides); the lovely Calandrinia umbellata, a good plant for rock-work; two Lobelias, and the Anemone-flowered Rose, the latter (an odd looking species) is one of Mr. Fortune's importations. It is nearly related to the Musk Rose; and although possessing little beauty, it may perhaps prove valuable for the purposes of hybridization. The same collection also contained the deep, rich crimson-flowered Bouvardia splendens; the hardy, pale pink-flowered Calystegia pubescens, an admirable conservatory climber where plenty of room and partial shade is afforded; Billardiera mutabilis, covered with its porcelain-blue fruit; and a collection of Cape Pelargoniums, beautiful things which once were favourites, but which unfortunately are now so little regarded. They consisted of Ardens, a brilliant coloured variety; bicolor; gibbosum, a green-flowered sort, beautifully-scented in the evening; alternans, apparently a good plant for bedding; fulgidum, lateripes, bipinnatum, and quinquevulnerum; the two last both handsome. These species, though not so showy as the sorts now in vogue, possess a beauty of their own, and deserve attention, as well for the sake of variety as for the results which are likely to be obtained through hybridization. The Cape will, no doubt, give back those that are lost; and, if we can only once get the gardening skill of the present day to bear on the subject, these really beautiful objects will soon be reinstated.

BRITISH ASSOCIATION.

June 25.—Mr. Ward made some remarks on the results of his plan of growing plants in closed glass cases. He stated that the most perfect success had attended this plan, in bringing plants to this country from tropical climates. Where it had not succeeded it arose from the ignorance or carelessness of those who superintended it. In some instances the cases had been covered with tarpauling, thus preventing the access of light to the plants. Frequently they had not enough soil to grow in, or had not sufficient water. Unless the plants were placed as much as possible in their natural condition they would not do well in these cases, any more than any where else. Mr. Ward drew attention to the opportunity these cases afforded to the poor, in thickly-populated towns, of cultivating a taste for natural objects. He read an interesting letter from an artisan, who stated that growing plants in these cases had afforded him the most agreeable source of relaxation after his day's labour. Mr. Ward also stated, that not only could land-plants, and the higher forms of vegetation, be grown in these cases, but that the various forms of marine Algæ had been cultivated in artificial salt water.

Dr. Daubeny gave the results of his experiments on the growth of plants in closed glass cases. Many experiments had been conducted by him at Oxford on this subject. He had found that in the closed cases the oxygen was given out more rapidly from the plants than the carbonic acid gas was supplied, so that in the cases the atmosphere contained a larger quantity of oxygen than out of them. Mr. Philip Duncan recommended the trial of these cases for bringing home the Victoria Regia.

BOTANICAL SOCIETY OF LONDON.

May 7.—British plants had been received from Dr. Wood, Mr. Sansom, Mr. Meehan, and Mr. Roby, and a collection of Azorean specimens from T. C. Hunt, Esq., Her Majesty's Consul at St. Michael's. The Secretary stated that he had Dr. Greville's authority to say that he never collected Potentilla rupestris on Ben Lawers, and that probably some mistake had been made through the similarity of name with Potentilla alpestris, but that it is quite certain that the exhibited specimen was P. rupestris, and it was rightly named on its label, although (as now appears) inaccurately localised.

Mr. Watson exhibited specimens of an aquatic Ranunculus, hitherto unnoticed as a British form in that genus. In its character it is intermediate between the two groups of varieties (or quasi-species) included under the name of aquatilis and hederaceus, having the floating leaves of aquatilis, with the small flowers of hederaceus. As far as can be decided, while the fruit is immature, the plant exactly corresponds with the figure of R. tripartitus in the Atlas of Cosson and Germain, making one important exception in the total absence of submersed leaves with capillary segments. Fresh examples of R. Lenormandi and R. hederaceus were shown at the same time, in order to illustrate the differences. Two forms of R. aquatilis were also exhibited; one with the usual large flowers, the other with flowers about half the size, the latter being possibly R.? Petiveri. All the five forms were collected the day before on Esher Common, Surrey.

Mr. Watson also exhibited examples of the true Viola flavicornis of Smith, in contrast with the V. canina of Linnæus. They were brought to the meeting in order to show by fresh specimens the differences between the two (both in leaves and flowers), which were very perceptible. Mr. W. remarked that small specimens of the ordinary V. canina had been erroneously figured in the "Supplement to English Botany," as the V. flavicornis of Smith; and that Mr. Babington persisted in repeating the same error in the second edition of his Manual (published that day), although he could not fail to know now that the application of Smith's name "flavicornis" to the plant of the Supplement was an error on the part of Mr. Forster.

Mr. Watson also exhibited a variety of V. canina with smaller and lighter coloured leaves than usual, and a smaller and pale purple or pinkish corolla. He had found the original root several years ago in Surrey, and removed it into his garden, where it had flowered and seeded year after year; all the seedling plants springing up around it still resembling the parent in size and colour, without a single example of the ordinary V. canina appearing among them. He adduced this fact in order to show the hereditary repetition of a variety, without instances of reversion to the normal characters of the species, and that, too, in a character usually deemed so inconstant. Such a repetition is frequently accepted for evidence of specific distinctness, and yet cases like this prove its insufficiency.

PRUNING THE BANKSIAN ROSE.

This Rose differs widely in appearance from other Roses, and the difficulty experienced by many in inducing it to grow and flower freely, points out the error of treating it as other Roses. To bloom this Rose, do not prune it at set seasons, as with other Roses. It is disposed to form strong shoots in the summer time. Watch for the appearance of these, and so soon as they are about a foot long, pinch off their tops. In consequence of this check they will form laterals, which become well ripened and flower with certainty. It is necessary to cut their tops off early in spring, and from this period the plants should be watered all he growing season.

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

ANNUAL flower seeds, as Clarkia, Collinsia, Schizanthus, Ten-week Stock, &c., now sown in small pots, well drained, and kept in a cool frame, or a spare corner in a cool greenhouse, through winter, will be suitable for turning out in the open borders at the end of March or in April. Such plants bloom early and fine, and they are early ornaments for the flower garden; and as they decline, the spring-sown plants are coming into bloom. Seeds of many kinds, now sown in the open border, generally survive the winter, and bloom vigorously early the next season. **Carnations:** the layers should be taken off, severing them off *at a joint* as near the root as possible. Only a few of the bottom leaves should be trimmed off to admit the compost to settle closely around the stem, and that no leaves may rot inside the soil, and be likely to damage the main stem. The compost in which to pot them must not be rich, or the plants will be likely to grow too vigorous, and become what florists term too gross. Equal portions of year-old turfy loam and leaf mould, with a small proportion of sand mixed therein, is rich enough, and of a dryish texture, and the plants keep healthy in it if otherwise duly attended to. They must have a liberal drainage; over the broken pot, &c., spread a portion of moss or turfy loam, in order to prevent the compost settling amongst the bits of pot, and to allow a free passage for the water draining away. The compost must not be sifted, but chopped, and in its rough state. In potting, place two layers in each pot. When potted, put them in a cool frame for about ten days, keeping the lights closed, and shaded from mid-day sun; this contributes to an immediate striking root afresh: afterwards they may be fully exposed in a sheltered spot, having a thick floor of coal-ashes or boards to place the pots upon, in order to prevent worms entering. **Pinks:** beds of them may still be made, and the earlier the more successful. **Pansies:** beds of them should be made for next spring bloom. Pot some of all the best kinds in small pots, to be placed in a cool frame during winter. If the sowing of the seeds of biennials, as Scabious, Canterbury Bell, Brompton and Queen Stocks, &c., has been neglected, they should be attended to as early as possible. **Verbenas:** runners should be potted in small pots, a third filled with potsherds and the rest with good loamy soil, placing them in a close cool frame for ten days, shading from mid-day sun; after which gradually expose them to open air. Attention to them should be immediate. When placed in a cool frame or greenhouse for winter protection, they must be kept near the glass, and in a dry situation. Put in cuttings of all bed plants as early as possible, taking short well-ripened shoots, as the very gross fleshy ones are not generally free to strike root, and very liable to damp off—Petunia, Heliotrope, Hemimeris (Celsia of some), Bouvardia, Cuphea, Salvia, Maurandia, Calceolaria, Pelargonium, double Ragwort, Anagallis, Fuchsia, &c. Bulbous-rooted plants, as Hyacinth, Crocus, Tulip, Narcissus, Guernsey Lily, Iris, &c., for early forcing, should be potted as soon as possible; if not in possession, they may now be obtained of the nurserymen and seedsmen. The double Sweet Violets should now be taken up from the open ground, and be planted on a bed in a frame or in pots, in order to have them in bloom by Christmas, &c. (See articles in former Numbers.) Seedling Auricula and Polyanthus plants should be potted off as soon as large enough. RANUNCULUS beds should now be prepared as follows:—The depth of soil to be two feet and a-half, of a rich clayey friable loam, retentive of moisture, about six or eight inches from the surface to be a rich light loam of a sandy nature. Remove the whole of the soil with the remains of the dung given last year, and turn up the subsoil a whole spade in depth, breaking it well. If the beds are allowed to remain in this state for a day or two to sweeten the subsoil it will be an advantage. Then place upon the subsoil a layer of cow-dung, at least one year old, four inches thick; then scatter over it the fine powder of new-slaked lime, to correct any acidity and destroy the worms. Then fill up with new light soil, taken from the surface of the old tulip-bed or potato-ground, which has been frequently turned to sweeten it. LILIES: Crown Imperials, Crocus, Narcissus, Snowdrops, &c., are in large masses, and require to be divided; they should be done as early as possible, and replant immediately. LOBELIAS: offsets of, should be potted off, to have them well established before winter; or one or more of large stock plant of a sort be potted entire, to furnish strong offsets towards spring. CHINA and TEA ROSES: cuttings of, strike readily now. MIGNIONETTE for winter blooming: see articles upon, &c. SEEDS: many kinds will now be ripe; attend early to gather them. Pentstemon, Chelone and similar border plants, should be increased by cuttings or parting the plants, or they often die in winter.

IN THE GREENHOUSE, &c.

PELARGONIUMS, that were headed down, and have pushed shoots an inch or two long, should be repotted, taking away the greater part of the old soil, and repotting in new compost. Cuttings which are rooted should be potted off (see articles upon). CAMELLIAS: thin the buds where numerous, which tends to preserve more certainly those left for blooming, and to have them more vigorous. Any desired to bloom by Christmas should be placed in the greenhouse. GREENHOUSE PLANTS: the general stock will require housing by the last week in the month, for if left out later they often turn brown by the operation of the cold air. Succulents should be taken in soon to save them from any excess of wet. CINERARIAS, in open beds, should be repotted by the end of the month, for winter blooming, &c. CAMELLIAS may now be grafted. CHRYSANTHEMUMS must be encouraged in every way to promote their vigour, by repotting, watering with liquid manure, &c., occasionally. CHINESE PRIMROSES should be similarly encouraged for winter blooming.

SHRUBBERY, &c.

When it is intended to remove large evergreen shrubs, &c., the coming season, it very materially contributes to success to have a deep trench cut round the plant at the size the ball is intended, and thus cut in the roots, which induces them to push lateral ones, and such readily strike afresh when removed. October and early in November is the best season for planting evergreens; the ground possesses some heat then, and promotes their more immediate establishment, and the air is cool and damp in a proportionate degree.

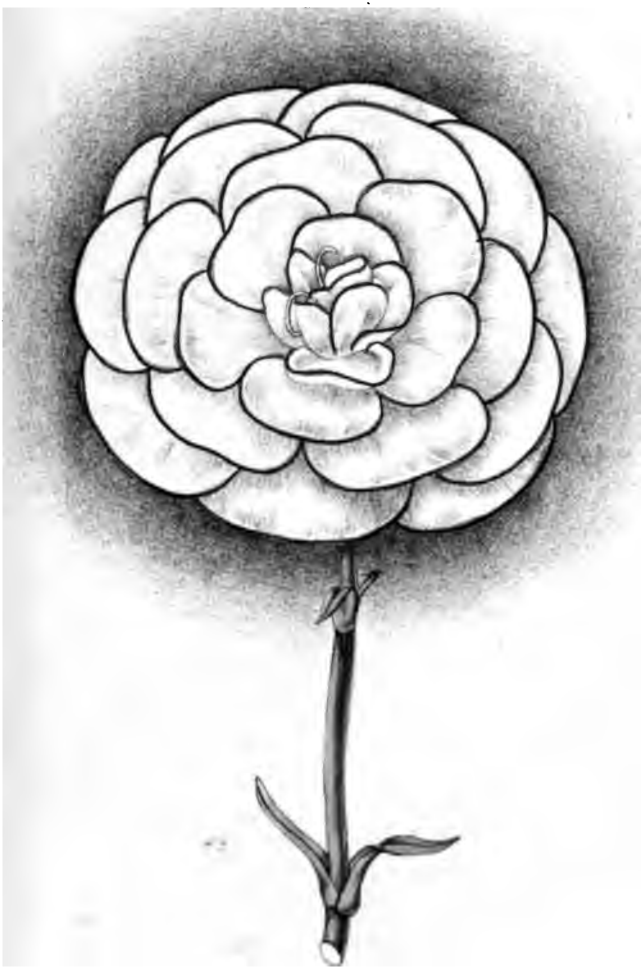
ON FORCING THE CAMELLIA.

BY R. ERRINGTON.

Of all the tribes adapted to cheer the gloomy months of December and January, this, when highly cultivated, is one of the most useful, combining the character of a glossy and rich evergreen with the gay tints of the rose.

Forcing into wood early in the previous year is the one grand principle on which all success with this, as a winter flower, must depend. If this principle is strictly pursued, and under a rather high temperature, combined with much atmospheric moisture (affording a full and free development of the latent energies of the plant), no midsummer or after-growth will be procured. When the latter takes place it is a sure sign that conflicting principles have been at work, through a somewhat capricious mode of treatment; that is, with regard to the ultimate object in view. Some persons advocate placing them out of doors in the end of summer. I am prepared to admit that, when the weather is genial, and all is right at the root, this course may be conducive to size in the blossom; however, there is no real necessity for it. I never place mine out unless necessity compels me, and when such has been the case, damage of some kind has generally counterbalanced the benefits anticipated. My plan (and I have been very successful) is this:—First, to force them into wood with rapidity the moment they show a tendency of their own accord to commence growth. Secondly, to lower the temperature (if possible) as soon as they cease to grow. Thirdly, to cut off, in a considerable degree, their supply of moisture at root during this stage. And, lastly, to reverse in some degree the latter plan as soon as the stock in general have formed decided flower-buds.

All potting or shifting rendered imperatively necessary is performed by me shortly after they have ceased growing. Limitation of space precludes all possibility of showing here how the application of these principles produces the desired results: such, however, is the case, and those who follow them out, with plants possessing (as one of our best gardeners facetiously observes with regard to Pines) "live roots," will always ensure success. I may remark in regard to soils, in conclusion, that chopped turf of any kind will grow them in perfection, if combined with a particular drainage, and accompanied at proper periods by the uses of highly clarified liquid manures. I prefer unctuous loam two parts, sandy heath soil one part, in a somewhat fresh state, chopped and equally blended, to which I add most liberally coarse boiled bone and charcoal, with a little sharp sand.



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Jenny Lind.

OCTOBER, 1847.

ILLUSTRATIONS.

PENTSTEMON GENTIANOIDES ALBA.

EVERY species and variety of Pentstemon merits the attention of the lover of flower-garden ornaments. In some former volumes of our Magazine we figured several handsome kinds, and we feel much gratified to insert the three beautiful ones which occupy the plate of our present number.

We are not aware of the origin of P. gentianoides alba; but having obtained it last spring, it has bloomed most profusely in the open border for several months, and appears likely to continue so to the end of the season. It is a vigorous growing half-shrubby plant, perennial, and forms a pretty bush two to three feet high. It produces numerous spikes of its lovely white flowers, each spike from a foot to half a yard long. It was planted in a collection of several other sorts, and its contrast with their flowers of scarlet, crimson, blue, purple, rose, and lilac, produced a charming effect. The plant is hardy, easy of increase and culture, and deserves to be in every flower garden.

P. GORDONI.—This handsome species is a native of North America, and has been raised from seed by Edward Leeds, Esq., of Manchester. It is a half-shrubby, perennial, hardy plant, growing half a yard high, and blooming very profusely. The plant we saw was most strikingly ornamental and beautiful. It is a valuable acquisition.

P. M'EWANI.—A very pretty variety, which we saw too, in fine bloom, in the Royal Gardens of Kew. It is a half-shrubby plant, growing from a foot to fifteen inches high. A very abundant bloomer. It deserves to be in every collection.

The cultivation of the tribe is very easy. Nearly all the kinds strike readily by cuttings inserted in sand and placed in a gentle heat. They soon push roots, and being potted off singly, also gradually hardened, are early prepared for the open border. In a good rich loamy soil, upon a dry subsoil, and an open situation, they flourish admirably. In a pent-up situation they grow weakly, and in a wet soil speedily die. They ought to be protected from strong winds, as the flowers soon damage. In case of the casualties of a severe winter, a supply of plants should be kept in pots in a cool frame or pit, and be turned into the border in spring.

NOTES ON NEW OR RARE PLANTS.

CAMELLIA JAPONICA, VAR. MINIATA.

This very pretty variety was raised from seed, in the nursery of Messrs. Low and Co., of Clapton.

A flower of C. myrtifolia was supposed to have been impregnated by one of C. Lady Hume's blush. The flower is very like a superior one of myrtifolia, a rich vermilion, with a blush-white centre, surrounding a point of deep rose young unexpanded petals. The flower is generally of a fine form, but sometimes is six-angled, like those of Lady Hume's blush. It is a very handsome variety, and a valuable acquisition to this noble tribe of plants. (Figured in *Pax. Mag. Bot.*)

DENDROBIUM KUHLII.

Orchideæ. Gynandria Monandria.

Mr. Lobb sent this singular species from Java, to Messrs. Veitch's. The flowers are smallish, produced in an erect many-flowered raceme; a bright rose colour. In size and form, a separate flower is like a single Larkspur about an inch long. (Figured in *Bot. Reg.*, 46.)

EDGWORTHIA CHRYSANTHA—GOLDEN-FLOWERED.

Thymelaceæ. Octandria Monogynia. (Syn. *Daphne papyrifera.*)

Mr. Fortune discovered this shrub in Chusan, and in 1845 sent it to the Horticultural Society, in whose garden at Chiswick it bloomed this spring in the greenhouse. The flowers are small, produced in terminal balls, in form like those of Hoya carnosa. Each ball of flowers is about an inch and a half across. They are of a golden yellow colour, sweet scented. It is a greenhouse or half-hardy plant. (Figured in *Bot. Reg.*, 48.)

EPIDENDRUM PYRIFORME—PEAR-SHAPED (bulbs).

Messrs. Loddiges imported this small species from Cuba; it bloomed last January. The flower stems rise to about five inches high, each bearing one or two blossoms. A separate flower is about two and a half inches across, petals greenish-yellow and red, and the lip a pale straw colour, veined with crimson. It is a pretty species.

ERANTHEMUM STRICTUM—THE UPRIGHT.

Acanthaceæ. Diandria Monogynia.

A very beautiful flowering plant; was introduced into this country by J. Slater, Esq., of Newick Park, near Uckfield, in Sussex, from Nepal. It is a shrub, growing three or four feet high when permitted, but is easily kept a dwarf plant, at any desired size, blooming equally profuse. The flowers are borne in erect spikes, which are from one to two feet long; they are of a rich deep blue colour. Like the lovely, well-known E. pulchellum, it is a winter blooming plant, and highly ornamental. It flourishes best in the hothouse, but will do well in a warm greenhouse or conservatory, and, like E. pulchellum, ought to be grown in every one. They are great favourites of ours, and which we frequently admire. (Figured in *Pax. Mag. Bot.*)

EXOGONIUM PURGA—THE TRUE JALAP PLANT.

Convolvulaceæ. Pentandria Monogynia. (Syn. *Ipomeæ purga.*)

An inhabitant of the woods near Xalapa, in Mexico, whence the name, and the tuberous purgative roots, for medical purposes, are collected. It has bloomed in the stove, at the Chiswick Garden. The tube of the flower is about three inches long; the size of a small wheat straw; the limb (surface of the flower) is flat, two inches across; the whole of a deep purplish-rose colour. (Figured in *Bot. Reg.*, 49.)

GARDENIA LONGISTYLA—LONG-STYLED.

Rubiaceæ. Pentandria Monogynia.

Mr. Whitfield discovered it in Western Africa, and it requires to be grown in the hothouse in this country. It has bloomed in the collection of Messrs. Lucombe, Pince, and Co., of Exeter. It is a vigorous shrubby plant; the flowers are terminal, and are borne in a large cluster of twenty or more. The tube of each flower is two inches long, green. The limb consists of five spreading segments, about an inch and a half across, greenish without and white within. It is a handsome species, and the long style being twice the length of the flower has a singular appearance. (Figured in *Bot. Mag.*, 4322.)

IXORA GRIFFITHII—MR. GRIFFITH'S IXORA.

Rubiaceæ. Tetandria Monogynia.

Mr. Low, jun., introduced this fine species from Singapore, and it has been sold out under the name of I. hydrangeæformis. Its present name is commemorative of its first discoverer, Mr. Griffith. It is a noble stove plant, the leaves being about a foot long. It requires the same treatment as I. coccinea and others. The flowers are produced in a terminal broad head, nearly flat at the surface, and about five inches across. The blossoms are at first a rich orange yellow, but afterwards change to a fine red orange. A specimen, in bloom, was exhibited at the show in the Regent's Park Garden last July, by Messrs. Lucombe, Pince, and Co. With us it grows very rapidly, and it appears to be easy of culture. It ought to be in every stove collection. (Figured in *Bot. Mag.*, 4325.)

LISIANTHUS ACUTANGULUS—SHARP-ANGLED.

Gentianeæ. Pentandria Monogynia.

From South America. It has recently bloomed in the Royal Gardens of Kew. It was forwarded in the hothouse, and when in bloom was kept in the greenhouse. It grows to the height of two to three feet. The flowers are produced in racemes, in a loose branching panicle; they are bell-formed, an inch long, green. It is a biennial plant. (Figured in *Bot. Mag.*, 4324.)

Medinilla speciosa—The Showy.

Melastomaceæ. Octandria Monogynia.

An inhabitant of Java, from whence Mr. Lobb sent it to Messrs. Veitch's, who exhibited it in bloom at the Horticultural Society's show at Chiswick last July. It is a shrubby plant, about four feet high, erect branching. The flowers are borne in drooping terminal panicles, eight or nine inches long; a delicate rose colour. A separate blossom is about three quarters of an inch long and the same across. (Figured in *Bot. Mag.*, 4321.)

Viburnam plicatum—Crimpled-leaved Gueldres Rose.

Mr. Fortune says this plant is a native of the northern parts of China, and is much cultivated in the gardens of the rich, by whom it is much admired. When full grown it forms a bush eight or ten feet high. It blooms very profusely, and, like the common Gueldres Rose, forms numerous heads of snowball flowers. It is perfectly hardy, and is growing in the Chiswick Garden. It will be a great favourite in our shrubberies, &c. (Figured in *Bot. Reg.*, 51.)

Browallia Jamesoni.

This is a very valuable addition to this interesting genus. It is a shrubby plant, blooming profusely. The flowers are a bright orange and yellow, exceedingly showy and beautiful. It is in the collection of Messrs. Veitch, of Exeter.

Rhododendron Javanicum.

This singularly beautiful species has been sent to Messrs. Veitch, from the mountains of Java. It is about as hardy as the Chinese Azaleas. It is a fine-looking plant, the leaves being a deep green, flat, about six inches long and two broad. The flowers are produced in large heads; a beautiful orange colour. It is a superb plant.

Clematis tubulosa.

This fine species is a native of Northern China. It forms a handsome bush. The flowers are borne in clusters and spikes, of an azure-blue colour (like Bluebells), which continue in perfection through the end of summer and autumn. It is considered to be hardy too. It is in the collection of Messrs. Backhouse, of York.

Tom Thumb Scarlet Pelargonium.

We have seen numerous beds of this lovely variety during the present season. Its dwarf character, most profuse blooming, rich dark green foliage, and brilliant scarlet flowers, render it unequalled for the purpose. Some beds of it were margined with the dwarf variegated-leaved, having lilac flowers—it had a pretty effect; and in another instance the bed was margined with the variegated-leaved, having scarlet flowers. The new and handsome variety of this section of Pelargoniums called Lucia rosea, with flowers of a beautiful delicate pinky-rose, having one-third of each of the upper petals nearest their origin white, giving a very neat contrast, is valuable. The heads of blossoms are large, and the flower of good form. The centre of a circular bed planted with it, and a broad space around of the Tom Thumb, had a most lovely appearance. The Lucia rosea grows a little higher than Tom Thumb, and the two combined have a nice arrangement of growth.

ALLAMANDA GRANDIFLORA.

This is a magnificent species, and one of the very best climbing plants. The flowers are larger than those of A. cathartica, being five inches across; and the tubular portion, which gradually widens to the mouth, is five inches long, and a much richer golden-yellow colour. Whether the plant be trained to a pillar, or grown in a pot and trained around a wire frame, it blooms very freely. No stove, conservatory, or warm greenhouse, ought to be without it.

ACHIMENES VENUSTA.

An hybrid which it is supposed was raised between patens and rosea, the flowers being as small as the rosea, but the colour as rich as the patens. It is in Messrs. Backhouse's collection at York, and a beautiful addition to this lovely tribe.

VERBENAS.

DIVERSITY (Beadle's).—A seedling of the present season. It produces its heads of flowers in different colours, some being wholly rosy-lilac, others of a deep violet-purple, and others composed of a mixture of blossoms of deep purple and of rosy-lilac. Upon one truss of bloom the lighter petals are edged with crimson-purple, having a rose stripe up the centre.

ST. MARGARET (Barker's).—A light scarlet-crimson, the centre being very distinctly tinged with the beautiful violet displayed in the flower of the Cactus speciosissimus. The trusses of bloom are large, as is also the individual flower, which is of good substance and excellent in form. It will be found an acquisition in whatever collection it is introduced.

MARCHIONESS OF AILSA (Barker's).—A very neat pale pink, which becomes lighter to the centre of the flower. Good shape and substance, distinct, and very pretty.

MAGNA (Barker's).—A rich rose-pink; the flowers and trusses large; good substance and form. A very lively and handsome variety.

EMPRESS OF SCARLETS (Barker's).—This is the most brilliant in colour of any we have seen. The shape is not very good, but the plant is of excellent habit, and for bedding it will prove a splendid variety.

PICOTEES.

KING JAMES (Headley's).—Fine white ground, with beautiful heavy rich crimson edge; the petals smooth and broad. Has obtained many prizes.

VENUS (Headley's).—Heavy rose-laced petals, large, and edge smooth; fine form.

JENNY LIND (Edmonds').—Fine red laced, and is considered the finest edge ever raised. Has obtained many prizes.

Amy (Burroughs').—White good, rosy-purple lace; fine form.

Eclipse (Matthews').—White pure, with light purple lace; petals firm and very double.

Juliet (May's).—White good, laced with light red; petals firm and double.

Emma (Burroughs').—White good, laced with light red; petals firm, and fine form.

General Jackson (Burroughs').—A very showy variety, with heavy rich purple lace.

Minerva (Burroughs').—A large flower, with light purple lace and a pure white ground; fine form.

Mrs. Edwards (Wilmer's).—White pure, and heavy laced with purple; fine form.

Victoria Regina (Marris').—White good, and a heavy fine rose-laced flower; petals firm, and fine form.

Antagonist (Reed's).—White good, and heavy red lace.

Beauty (Norman's).—White pure, with a small delicate light purple edge; a fine form.

Enchantress (Matthews').—White pure, laced with light purple; petals firm, and fine form.

Lord Hardinge (Smith's).—A rich heavy purple-laced flower; fine form.

Privateer (Lee's).—White pure; a very distinct rose-laced, heavy-edged flower; petals fine form.

Superb Roses.

In our attendance at the exhibitions held in and around London this year we made a selection of the *best formed* and most *distinct* Roses. The following were especially fine:—

Lady Stuart (hybrid China).—Globular, silvery-blush; large size.

Reine des Belges (hybrid Provence).—Pure white; very perfect.

Aimée Vibert (Noisette).—Pure white, in large clusters; trains well to cover a trellis, or against a wall; very beautiful when in bloom.

Souchet (Bourbon).—Crimson-scarlet; large and very showy.

Kean (Gallica).—Rich crimson, shaded with purple; splendid.

Charles Duval (hybrid Bourbon).

Felicite (Alba).—Rich rosy-flesh; very beautiful.

Baronne Prevost (hybrid perpetual).—Rich rose; very large and magnificent.

William Jesse (hybrid perpetual).—Bright pink-rose, very large, highly fragrant; superb.

Coup d'Hebe (hybrid Bourbon).—Bright flesh-pink, large globular; very superb.

Duchess of Kent (hybrid Provence).

Duchess of Sutherland (hybrid perpetual).—Bright rose, beautifully mottled; very splendid.

Boule de Nantieul (Gallica).—Purple-violet, shaded with slate-colour; very magnificent.

La Reine (hybrid perpetual).—A brilliant rose colour, and a superb large flower.

Hortense le Roy (hybrid Bourbon).—A very bright rose colour, and a superb flower.

Œillet Parfait (Gallica).—Light rosy-purple, beautifully striped with rose and bright red; very handsome.

Paul Perras (hybrid Bourbon).—Bright rose, shaded with dark; very large and splendid.

Madame Laffay (hybrid perpetual).—Deep rich rose colour; very large, superb form, and showy.

Proserpine (Bourbon).—Rich crimson-red, tinged with purple; a splendid rose.

Duc de Valmy (Gallica).—A magnificent bright rose-coloured flower.

Queen of the Bourbons.—Delicate creamy-salmon; very fragrant and beautiful.

Anne Beluze (Bourbon).—Delicate rose colour; very beautiful.

Augustine Mouchelet.—Bright rose colour, with a carmine centre; very handsome.

Elize Sauvage.—Tea-scented; yellow, with an orange centre; beautiful.

Aricie (hybrid perpetual).—Beautiful rosy-lilac.

Pearl des Panachees.—A very beautiful light and dark-striped rose; peculiarly handsome.

Modeste Guerin.—A very beautiful and excellent rose.

Solfaterre (Noisette).—Bright sulphur; very large.

Letitia (Gallica).—Rich deep rose, large and very compact; very superb.

Glorie de Couline (hybrid China).—A brilliant crimson, large globular, and very splendid.

Duc de Trevise (Gallica).—Rich velvet-crimson, edged and striped with purple, and most superb.

Amiable Queen (Gallica).—Fine velvet-purple; very superb.

Duguesclin (Gallica).—Dark velvet-crimson; very superb.

William Tell (Gallica).—A fine brilliant rich rose colour.

Emperor (Moss).—A very brilliant crimson.

Lady Warrender (tea-scented China).—White, with a buff centre; very superb.

Colbert (Gallica).—Dark purple-crimson; fine.

Shakespeare.—Rich crimson, with a dark centre; very fine.

The above have been noted with great care, and we can assure our readers they are of first-rate character. We do not wish it to be understood we exclude all others, but they were the best of the very numerous kinds exhibited the past season at the noble exhibitions named above.

At the Royal Gardens, Kew.

Vernonia axilliflora.—The plant is a neat boxtree-like stove plant, producing its numerous flowers in tufts: they appear like fine threads, about half an inch long, and are a fine blue colour, very pretty and neat. Well deserves to be grown in every collection.

Pterostigma grandiflora.—The flowers are somewhat of the mimulus form, a pretty blue colour, stove plant.

Stephanotus Thomasii.—The plant is similar in appearance to the S. floribundus. The flowers too are produced in heads of six or eight in each, and a little larger than those of the last-named species, and a much more pure white. Beautiful as are the flowers of the S. floribundus, this species is much handsomer. It deserves to be in every stove; and grown as a tall twining plant, or round a wire frame, will prove an object of universal admiration.

Erythrina laurifolia.—At the east side of a hot-house wall a lean-to frame-work has been constructed. Amongst the plants turned into the border is one of the Erythrina. It has been in several years, and now the main stem is six inches diameter. The main stem has been headed down at three feet high, and at its summit has produced annually a head of numerous shoots, similar in its form to the pollard willows, &c., often seen by way-sides and in hedgerows in moist situations. This season it has forty-eight spikes of flowers, each from three to four feet high, and the new shoots are six feet long. The flowers are larger than those of the E. cristi-galli, of a deeper crimson-red, and forms a splendid object. The inclosure is not heated by flue, but there are a few openings in the wall of the hot-house, which are closed in summer, and opened if necessary in a severe night in winter, in order just to keep the severities of frost out. It well deserves to be grown wherever practicable, as it would do well against a south wall, dwelling-house, &c.

Stachytarpheta aristata.—A plant with six face spikes of the lovely violet-velvet coloured flowers, was an object of much admiration.

Scutellaria ventinette.—Several plants of this lovely flower were in splendid bloom, the fine spikes of tubular rich scarlet flowers producing a most striking appearance. The plant grows about two feet high, and deserves to be in every stove or warm greenhouse.

Scutellaria .—This is a dwarfer growing plant. It blooms very profusely. The flowers are about the same size, and a bright scarlet colour. It, too, ought to be grown in every similar situation. They are highly ornamental, and of easy culture.

Carnations.

Sarah Payne (Ward's).—A pink and purple bizarre. A very fine-formed flower, distinctly marked, and very handsome. A first-rate flower, and much admired at the Royal South London Show.

Earl Spencer (Barringer's).—A purple flake, of first-rate form; petals good substance, and smooth edge; the marking very clearly defined, having a pure white and distinct fine purple. A very desirable flower.

Gladiator (Hollyoak's).—A scarlet flake, the white pure, the scarlet brilliant, the petals of good substance and fine form. A superior and a very desirable flower.

Gladiator (Slater's).—A crimson bizarre; the marking is very distinct and rich in colour; petal firm, and of fine shape. A superb flower, fit for any collection.

ON THE LOVE OF FLOWERS.

In recent pages of the Floricultural Cabinet I notice that attention is now directed to the beautiful wild flowers of our own country. I recollect the following lines on these and others were given me by a friend, and I forward them for insertion, as it exhibits that they appeared lovely in the eyes of others before us.

There is an inspiration in the works of nature which gives a more than usual power even to talents of a common order, when treating of them; and although we take greater delight in the rose, the violet, or the lily, we also love to pluck from the hedge-side the hawthorn and the ragged-robin. Wordsworth very naturally describes the inclination we have to gather wild flowers:

———————" We paused, one now,
And now the other, to point out, perchance
To pluck, some flower or water-weed, too fair
Either to be divided from the place
On which it grew, or to be left alone
To its own beauty."

On some occasions it has been necessary not only to cast aside the hedge-flowers of poetry, but also to pass by the roses. Even Chaucer, so copious are his praises of some of his favourite flowers, we could not venture to quote so insatiably as inclination would lead us. Most of our best poets have touched upon the beauty of flowers, more or less:—Chaucer, Spenser, Milton, and Shakspeare, the great poetic luminaries of our island,

——————————" the sages
Who have left streaks of light athwart their ages,"

have all dwelt largely on them. Ben Jonson, too, and Beaumont and Fletcher, Drayton, Dryden, Thomson, Cowper, &c. In our own times, Wordsworth, Byron, Moore, Hunt, Keats, Scott, Montgomery, Cornwall, and Clare, have revelled in them like bees. It has been remarked as a defect in Pope, that he says little or nothing, in his poems, of the works of nature; and it does appear an extraordinary thing in a poet, so tremblingly alive to beauty in every shape as poets naturally are, and necessarily must be. Pope was a poet for the drawing-room; but there are few even among ungifted individuals totally insensible to the soothing influence of flowers and trees:

" The enamelled earth, that from her verdant breast
Lavished spontaneously ambrosial flowers,
The very sight of which can soothe to rest
A thousand cares, and charm our sweetest hours." Garcilasso.

" This lucid fount, whose murmurs fill the mind,
The verdant forests waving with the wind,
The odours wafted from the mead, the flowers
In which the wild bee sits and sings for hours;
These might the moodiest misanthrope employ,
Make sound the sick, and turn distress to joy." *Ibid.*

If flowers have so much beauty in common eyes, what must they be in the eye of a poet, which gives new charms to every object on which it gazes! A poet sees in a flower not only its form and colour, and the shadowing of its verdant foliage—his eye rests upon the dew-drop that trembles on the leaf; a gleam of sunshine darts across, and gives it the sparkling brilliancy of a diamond. He sees the bee hovering around, buzzing its joyous anticipation of the honey he shall draw from its very heart; and the delicate butterfly suspended as it were by magic from its silken petals. His imagination, too, brings around it a world of associations, adding beauty and interest to the object actually before his eye. Thus flowers have been described in all their seasons, and in every variety of situation and circumstance, budding forth in timid beauty in the early spring, glowing in the maturity of summer, lingering in the chilling breath of autumn, and some few as daring even the frosts of winter. They have been represented as sinking with drought, weighed down with rain, and fading in the noon-day sun; as opening, fresh with dew, to the beauty of the morning, and closing with the day; as enlarged and improved by the hand of art; as dying, or growing rank and wild, under the influence of neglect.

How beautifully the poet says, in praying for the inspiration of poesy,

————" 'twill bring me to the fair
Visions of all places: a bowery nook
Will be elysium—an eternal book
Whence I may copy many a lovely saying
About the leaves and flowers; about the playing
Of nymphs in woods and fountains; and the shade
Keeping a silence round a sleeping maid;
And many a verse from so strange influence,
That we must ever wonder how and whence
It came!" KEATS.

The spring is, in particular, a subject delightful to the poet. He loves to celebrate the cheerful season when

" The palms put forth her gems, and every tree
Now swaggers in her leafy gallantry." HERRICK.

" As spring, attended by the laughing hours,
After long storm is wont to reappear,
When the mild zephyr, breathing through the bowers,
Brings back its former beauty to the year,
And goes enamelling the banks with flowers,
Blue, white and red, all eyes and hearts to cheer."
WIFFEN'S GARCILASSO.

Gawin Douglas gives an exquisite picture of May. April is described by a French poet in the colours of an English May; the spring, of course, being somewhat earlier in the warmer climate of France:

" April—the hawthorn and the eglantine,
Purple woodbine,
Streaked pink, and lily-cap, and rose,
And thyme, and marjoram, are spreading
Where thou art treading;
And their sweet eyes for thee unclose." REMY BELLEAU.

The dew on flowers, on the violet in particular, has frequently been compared to tears trembling in a blue eye. A dew-drop has given life to some of the loveliest gems of poetry:

"See the dew-drops how they kiss
Every little flower that is,
Hanging on their velvet heads
Like a rope of crystal beads." FAITHFUL SHEPHERDESS.

"The air was cooling, and so very still,
That the sweet buds which with a modest pride
Pull droopingly, in slanting curve aside,
Their scantly leaved and finely-tapering stems
Had not yet lost those starry diadems
Caught from the early sobbing of the morn." KEATS.

"Dew-drops like diamonds hung on every tree,
And sprinkled silvery lustre o'er the lea;
And all the verdurous herbage of the ground
Was decked with pearls which cast a splendour round;
The flowers, the buds, and every plant that grew
Sipp'd the fresh fragrance of the morning dew.
In every plant the liquid nectar flowed,
In every bud, and every flower that blowed;
Here roved the busy bees without control,
Robbed the sweet bloom, and sucked its balmy soul."

We seldom see a parterre of flowers, on a fine summer's day, in which the butterfly and the bee are not present,

"Feeding upon their pleasures bounteously."

The murmur of bees is a grateful sound—it tells of sunshine and sweet odours; it is one of those gentler tones of nature's voice which have a kind and soothing influence on the spirits; like the whisper of a gentle air among the leaves; the sigh of the long grass, as it bends before the breeze; or the murmur of a neighbouring runnel. It could not then be overlooked by the poet:

"Him to soft slumbers call
The babbling brooks, the fall
Of silver fountains, and the unstudied hymns
Of cageless birds, whose throats
Pour forth the sweetest notes;
Shrill through the crystal air the music swims;
To which the humming bee
Keeps ceaseless company
Flying solicitous from flower to flower,
Tasting each sweet that dwells
Within their scented bells;
Whilst the wind sways the forest, bower on bower,
That evermore, in drowsy murmurs deep,
Sings in the air, and aids descending sleep."
WIFFEN'S GARCILASSO.

"From sapling trees, with lucid foliage crown'd
Gay lights and shadows twinkled on the ground:
Up the tall stems luxuriant creepers run,
To hang their silver blossoms in the sun;
Deep velvet verdure clad the turf beneath,
Where trodden flowers their richest odours breathe;
O'er all the bees with murmuring music flew
From bell to bell, to sip the honied dew." MONTGOMERY.

(*To be continued.*)

ON THE COLOURED GLASS EMPLOYED IN GLAZING THE NEW PALM HOUSE IN THE ROYAL BOTANIC GARDENS AT KEW.

BY R. HUNT.'

It has been found that plants growing in stove houses often suffer from the scorching influence of the solar rays, and great expense is frequently incurred in fixing blinds to cut off this destructive calorific influence. From the enormous size of the new Palm-house at Kew it would be almost impracticable to adopt any system of shades which should be effective, this building being 363 feet in length, 100 feet wide, and 63 feet high. It was therefore thought desirable to ascertain if it would be possible to cut off these scorching rays by the use of a tinted glass, which should not be objectionable in its appearance; and the question was, at the recommendation of Sir Wm. Hooker and Dr. Lindley, submitted by the Commissioners of Woods, &c., to Mr. Hunt. The object was to select a glass which should not permit those heat rays which are the most active in scorching the leaves of plants to permeate it. By a series of experiments made with the coloured juices of the Palms themselves, it was ascertained that the rays which destroyed their colour belonged to a class situated at that end of the prismatic spectrum which exhibited the utmost calorific power, and just beyond the limits of the visible red ray. A number of specimens of glass variously manufactured were submitted to examination; and it was at length ascertained that glass tinted green appeared likely to effect the object desired most readily. Some of the green glasses which were examined obstructed nearly all the heat rays; but this was not desired, and from their dark colour these were objectionable, as stopping the passage of a considerable quantity of light, which was essential to the healthful growth of the plants. Many specimens were manufactured purposely for the experiments by Messrs. Chance of Birmingham, according to given directions; and it is mainly due to the interest taken by these gentlemen that the desideratum has been arrived at. Every sample of glass was submitted to three distinct sets of experiments. 1st. To ascertain, by measuring off the coloured rays of the spectrum, its transparency to luminous influence. 2nd. To ascertain the amount of obstruction offered to the passage of the chemical rays. 3rd. To measure the amount of heat radiation which permeated each specimen. The chemical changes were tried upon chloride of silver, and on papers stained with the green colouring matter of the leaves of the Palms themselves. The calorific influence was ascertained by a method employed by Sir John Herschel in his experiments on solar radiation. Tissue paper stretched on a frame was smoked on one side by holding it over a smoky flame, and then while the spectrum was thrown upon it the other surface was washed with strong sulphuric ether. By the evaporation of the ether the points of calorific action were most easily obtained, as these dried off in well defined circles long before the other parts presented any appearance of dryness. By these means it was not difficult, with care, to ascertain exactly the conditions of the glass, as to its transparency to light, heat, and chemical agency (actinism). The glass thus chosen is of a very pale yellow green colour, the colour being given by oxide of copper, and is so transparent that scarcely any light is intercepted. In examining the spectral rays through it, it is found that the yellow is slightly diminished in intensity, and that the extent of the red ray is affected in a small degree, the lower edge of the ordinary red ray being cut off by it. The tint of colour is not very different from that of the old crown glass; and many practical men state that they find their plants flourish much better under this kind of glass than under the whitest sheet glass commonly employed.—*Gardeners' Chronicle.*

FLORAL EXHIBITIONS.

HORTICULTURAL SOCIETY.

THE season for selecting pot Roses being arrived, we insert the names of the sorts exhibited at the June show of the Horticultural Society.

Collections of twelve distinct varieties of Roses, grown in pots.—Large silver-gilt medal to Messrs. Lane and Sons, for Niphetos, Souchet, Queen of La Reine, Ceres, Triomphe de Luxembourg, Elise Sauvage, Madam Bureau, Dumont de Courset, Prince Charles, Queen, Clara Wendel, and Nesida; silver-gilt medal to Messrs. Paul and Son, Cheshunt, for Madame Aude, General Kleber, Lutea, Comte de Paris, Fulgens, La Reine, Mrs. Elliott, Captain Sisolet, Lady Alice Peel, Persian Yellow, Bouquet de Flora, and Athelin; silver medal to Messrs. Lee, Hammersmith, for Lady Alice Peel, Mrs. Bosanquet, Comice de Seine, Lane's Hybrid Perpetual, Madam Laffay, Prince Charles, Souvenir de la Malmaison, Floralie, La Reine, Cramoisie, Eblouisante, Armosa, and Miss Clegg. Collections of eight distinct varieties of ditto.—Large silver-gilt medal to Mr. Francis, for Great Western, Selina, Mrs. Elliott, Lane's Hybrid, Denmark, General Kleber, Chenedole, and Comtesse de Lacipede. Cut flowers, collections of 100 distinct varieties of Roses.—Silver medal to Messrs. Paul and Son, for Lady Fordwich, Nathalie, Daniel, Madame Laffay, Blairii, Hippocrates, Prince Alfred, Safrano, The Pactolus, Captain Sisolet, Monteau, Cramoisie, Superieure, Sylvain, Parney, Princess Helene, La Grandeur, Devoniensis, Grandiflora, Coupe d'Amour, General Allard, Selina, Queen Adelaide, &c.; small silver medal to Mr. Francis, for Mrs. Elliott, Madam Laffay, Double Margined, Elise d'Henning, Safranot, Smith's Yellow Noisette, Elise Sauvage, Mirabile, Leopold, William Jesse, Napoleon, Comte de Paris, Duc d'Aumale, Gardenia, General Kleber, Charles Duval, Belle Marie, &c., &c.

The following were the splendid Heaths exhibited at the same show. Our readers will perceive which are most grown and thus distinguished for their merits. We insert it to be somewhat a guide to selection by any desirous to possess a superb collection.

Cape Heaths.—There were three superb collections of fifteen plants in each. They were fine grown specimens, *bushy* down to the pot, and in profuse bloom, generally from two to three feet high. Each kind is suited to grow in any collection, more especially those sorts found to be included in each of the three collections shown as Cavendishiana, &c.

First prize, Mr. May. Erica Beaumontiana, Cavendishiana, campa-

nulata, densa, depressa, denticulata moschata, eximia, elegans, halicacaba, perspicua nana, princeps, propendens, splendens, ventricosa rubra, vestita alba, vestita rubra, and Westphalingia.

Second prize, Mr. Hunt. Cavendishiana, campanulata, eximia, halicacaba, massonia, perspicuana, tricolor rubra, ventricosa splendens, v. grandiflora, v. coccinea, v. breviflora, v. tricolor, v. superba, and Westphalingia.

Third prize, Mr. Ayres. Bergiana, Cavendishiana, depressa, elegans, gemmifera, halicacaba, Humeana, jasminoides, splendens, tricolor, ventricosa coccinea minor, v. superba, v. rosea, v. alba, vestita coccinea.

The following were nurserymen's collections of twelve species.

First prize, Mr. Epps. Bergiana, Cavendishiana, florida campanulata, intermedia, perspicua nana, propendens, tricolor rubra, ventricosa superba, v. coccinea minor, v. breviflora, vestita rosea alba, v. grandiflora.

Second prize, Mr. Fairbairn. Cavendishiana, depressa, Dunbariana, eximia, Humeana, sanguineolenta, tricolor, ventricosa coccinea minor, v. breviflora, v. Bothwelliana, Vernoni superba, Wilsoni.

Third prize, Messrs. Veitch. Calycina capitata, Cavendishiana, densa, florida, gemmifera, gnaphalioides, metulæflora, tortulæflora, ventricosa superba, v. coccinea minor, v. breviflora, vestita coccinea.

Fourth prize, Mr. Fraser. Bergiana, Cavendishiana, daphnoides, depressa, perspicua nana, suaveolens, ventricosa coccinea minor, v. breviflora, v. carnea, v. tricolor, vestita rosea, v. alba.

Fifth prize, Mr. Pamplin. Bergiana, depressa, d. nova, gemmifera, mirabilis, perspicua nana, Russelliana, ventricosa superba, v. breviflora, v. prægnans coccinea, vestita grandiflora, v. fulgida.

Sept. 7.—On this occasion several subjects of considerable interest were produced.—A Silver Knightian Medal was awarded to Messrs. Loddiges, of Hackney, for a collection of Orchids, comprising Oncidium spilopterum, a very handsome and scarce species; an Oncidium from New Granada, Peristeria elata, with four strong flower-spikes; a Mexican Stenorhynchus; and various others.—From C. B. Warner, Esq., were Dendrobium formosum; a beautiful Cattleya violacea, bearing 36 open flowers; Zygopetalum maxillare; and the white Dendrobium aqueum from Bombay. A Silver Knightian Medal was awarded.—Mr. Plant, gardener to J. H. Schröder, Esq., sent Phalænopsis amabilis; and a good specimen of Dendrobium formosum, a charming species, and one of the easiest to cultivate. A Banksian Medal was awarded.—Mr. Glendinning, of the Chiswick Nursery, sent Statice purpurata and Justicia coccinea, the latter an old, but seldom seen species, which, with good management, will prove a very showy exhibition plant.—Mr. Groom, of Clapham Rise, sent two plants of Lilium lancifolium speciosum, each a single stem, bearing upwards of 40 flower-buds. They had been lifted out of the open border, and were sent to show how well these beautiful Japan Lilies succeed out of doors in the common garden soil, which was stated to have been well broken up, but not manured—manure being considered unnecessary in the culture of the Lily. It was mentioned that the bulbs were planted in the end of November, in a bed 15 inches asunder, and that they were covered 3½ inches deep with light soil. They were not protected in winter in any way; but after the stems died down the soil was carefully removed down to the bulbs and replaced by fresh material. The flowers were better coloured than those produced in a greenhouse, and now that these Japan Lilies have been ascertained to be hardy, they will, no doubt, become great favourites for out-door decoration, blooming as they do at this season, when flowers are so much wanted.—Of novelties, Messrs. Backhouse, of York, sent a most beautiful rosy purple flowered variety of Achimenes, named venusta, which looked as if it had been a cross between patens and rosea, having the rich colours of the former infused into the small flowers of the latter. A certificate was awarded it, and a similar award was also made to the same nurserymen for a cut specimen of an orange-coloured plant from Caffraria, resembling a Geissorhiza. Judging from an imperfect specimen, it appeared to be a very handsome thing, and if it should turn out to be hardy, as is supposed, and its habit at all correspond with its beauty, it will prove a desideratum. Messrs. Veitch and Sons, of Exeter, sent the bad variety of Achimenes Skinneri, a cut specimen of Lysionotus longiflorus, and Calceolaria albiflora, a neat looking species, which may perhaps prove suitable for bedding. A certificate was awarded it. Mr. Wood, gardener to J. G. Seager, Esq., sent Acanthophippium javanicum, and Mr. Ambrose, of Battersea, a scarlet Pelargonium named "Magnum bonum."

WINTERING HALF-HARDY FLOWERS FOR MASSES.

Early propagation is the most sure stepping-stone to successful wintering, added to which we may say early potting. Many persons propagate stock of this kind under hand-glasses; and there is no better plan in a general way, provided it is done betimes in the season. Where such is the case, the stock will be ready for potting off in the course of September, when they will get thoroughly established in their pots before winter commences, a thing of the utmost importance; for if hurried into pots, just before the approach of winter, they will of course require some watering to establish them, and such will prove their greatest enemy if frost supervene. Pots of about six or seven inches diameter are most eligible, and they must be thoroughly drained. The soil for them should be composed of three-fourths sound loam, the rest fine vegetable matter, with some sharp sand. Exciting manures are out of the question, as they will produce an overgrown plant which may soon become a prey to the Ice King. A pot of this description will hold nearly a dozen plants; it is a good plan, however, to let no two plants touch. Those who have not a frame or pit to spare should form a turf pit, which is in any one's power to do, the surface of which should have a plate of wood on which the protectors may rest; which protectors, if sashes cannot be spared, may be thatched hurdles, or wooden shutters, so contrived as to exclude moisture. The bottom of the pit must be rendered perfectly dry, and the pots may be plunged in coal-ashes or sawdust; the latter, if new, is excellent for the purpose.

ON FORCING HYACINTHS, &c.

The chief business is to get the root well established before growth commences, otherwise it is impossible to produce an early and strong bloom. Most of the failures are chargeable to the omission of this most important point; and the fault has not unfrequently been charged, most unjustly, on the roots. A soil composed principally of a mellow loam, with the addition of old cow manure and leaf soil, and a sprinkling of sharp sand and fine charcoal dust, will be found excellent material. Secure good drainage, and pot the bulb high—three parts above the level of the rim, taking care that the soil is in a mellow state, neither wet nor dry. They succeed by far the best in a cold frame, and it is most desirable that they should receive no moisture, beyond what the soil contains, until the pot is somewhat filled with roots. Those who have not the convenience of a frame may plunge them in cinder ashes in some sheltered spot, taking care to raise them above the ground level, for fear of water lodging. Take care, and let them be covered with six inches of some mellow material, such as old tan, old leaf soil, sawdust (if not too new), or ashes. Remove them to a warmer temperature as required; a few may be forwarded at a time, and so prolong the blooming season.

ON HEATING PLANT STRUCTURES.

Many of our readers are aware that within the last two years some new systems of warming greenhouses and other structures for cultivating plants in, have been introduced to public attention. A great deal has been published both in favour and in disapproval of them. We have received numerous applications, requesting us to give our opinion on the merits of the various systems employed, but more especially regarding the Polmaise and Hazard's. Compliance therewith would have been immediately given, but as we early remarked in our general monthly reply to correspondents, we required practical evidence to enable us to do so satisfactorily. We desire to benefit our readers, and not applaud a system because it is new, and a great fuss is made about it, as is done by some persons, and many have proved, at a considerable loss, the being often misled.

We have seen the Polmaise system in operation, but have not tried it satisfactorily to ourselves yet. We shall be glad to receive communications upon its merits from some of our readers who have had extended experience, so as to enable them properly to judge of its merits.

D. B. Meek, Esq., of Holmsdale, in Sussex, has ably advocated the Polmaise system of heating, and in a recent number of the *Gardeners' Chronicle* stated some slight objections to Mr. Hazard's. The latter gentleman has given the following reply in a subsequent number he sent us, along with other communications connected with the subject:—

"I take the liberty of commenting upon Mr. Meek's letter of October 24. In the first place, Mr. Meek arrives too hastily at the conclusion that glass is insensible to radiated heat, from the mere fact of the absence of high temperature in the burning-glass, having forgotten that the rays of the sun are not concentrated in the lens, but at the focus. The fallacy of the hypothesis may be easily shown by suspending the same lens before a parlour fire, when it will speedily become too hot to be incautiously handled. He is also wrong in attributing the sensation of cold in elevated regions solely to the incapacity of the air for absorbing radiated heat. It depends chiefly upon the rarefaction of the air permitting a less interrupted radiation, by which all matter within its limits is rapidly cooled down. There is another cause which acts upon ourselves in these situations, viz., a more free evaporation from the skin (also the effect of rarefaction of the atmosphere), tending, as is well known, to produce cold. But these are questions of abstract science, upon which it is not my present purpose to dwell further. To the attack of hot water I have nothing to object. I do not approve of hot-water warming, and am quite willing that it should be condemned; it is expensive and non-ventilating, and must be relinquished; at the same time I think it fair to acknowledge that it is better than most hot-air stoves, which dry and burn the air to a degree that renders it both unpleasant and unwholesome. I now come to that portion of Mr. Meek's letter which relates to myself, wherein he seems so grievously alarmed at the unlimited ventilation which I recommend. He is afraid that I shall not be able to control the supply of fresh air to a mere sufficiency for the respiration and existence of one thousand persons congregated in a church capable of containing four thousand. Poor people! he fears that they will be absolutely surfeited with fresh air! However, I do not anticipate that any clergyman or country gentleman will object to this healthful inundation, always provided it is made comfortably warm. But it appears that Mr. Meek doubts the possibility of doing this, except at an extravagant cost; and although I have before quoted instances, showing that the winter cost of warming a large suite of public rooms, with an area of nearly 120,000 cubic feet, has not exceeded sixpence for twenty-four hours, yet is not he convinced, and I am compelled to the ungracious task of pulling to pieces his calculations, and to exhibit one of my own. Mr. Meek has told us that, in order to maintain a temperature of 60° in a building, it is best to collect the coldest air from within (probably at about 40°), in preference to fresh air from without, which may be as low as 20°. He proceeds to say that half the fuel will suffice to raise air at 40° to 60°, over an interval of 20°, as is needed to raise air at 20° to 60°, over an interval of 40°. This may be quite true; but does Mr. Meek suppose that he will be able to keep the temperature of his house at 60°, by supplying air heated at 60° only, while there is a constant struggle on the part of the frost outside to reduce it to 20°? Let him plunge his thermometer into the air-tight chamber, where the atmosphere is submitted to contact with the heated iron plate, and I suspect he will find that his practice is to warm the air, not to 60°, but to 200° or more. We thus see that Mr. Meek's calculations are based upon wrong data, and I, therefore, request your attention to a corrected statement of the case. It requires a certain quantity of fuel to raise air from 40° to 200°, over an interval of 160°; an additional eighth will be needed to raise air from 20° to 200°, over an interval of 180°, showing an apparent loss of one-eighth to the ventilating system as compared with the Polmaise. But this loss is partly compensated by the smoke yielding up more of its caloric to the contact with the colder current, and, therefore, it is only fair to compute that one-sixteenth of the fuel is employed to procure the advantages of thorough ventilation. I mean next to prove that the principle upon which my stove is constructed derives twice as much heat from the combustion of the same quantity of fuel as do any of the ordinary arrangements. Mr. Meek gives well-merited praise to Dr. Arnott; I would gladly add my tribute, could I by so doing add honour to such a name. I am satisfied that this method of consuming fuel is incomparably superior to any other, upon which account I employ it in my stove. There is, however, a great loss of heat in the discarded smoke, even from an Arnott stove, and I suppose few of your readers will be prepared for the result of my experiment upon one. It stood in a room sixteen feet by fourteen feet; instead of allowing the smoke to escape directly into a chimney, it was carried through the wall into a series of pipes in the next, which was a large room; after traversing these pipes, it was discharged into the chimney. The waste smoke giving off its heat over the large surface of the pipes, raised this latter room to a temperature exceeding that containing the stove by 12°; I have therefore added to the advantages of Dr. Arnott's combustion a more economical application of the products, from which I abstract more than double the heat generally made subservient to the purposes of warming. I can, therefore, well afford to spare one-sixteenth for ventilation, of which also, I am happy to say, that Dr. Arnott is a distinguished and able advocate. I cannot conclude without protesting against any insinuation that my system has been 'accompanied by such practical difficulties as preclude its general employment.' I positively assert that in no one instance has this been the case; and it is only because I have been too fully occupied with my business here that I have not before corrected Mr. Meek's reiterated statements respecting the economy of the Polmaise return-air drains. ROBERT HAZARD."

(*To be continued.*)

DECEASE OF THE HON. WILLIAM HERBERT, DEAN OF MANCHESTER.

THE ardent zeal and unwearied perseverance of the above-named gentleman in his enthusiastic practical pursuits, and devotion of his superior talents to promote the interest of gardening in general, and floriculture in particular, for the last thirty years, many of our readers are acquainted with. Many excellent remarks and contributions from his pen have been inserted in our Magazine, particularly upon his favourite tribes of plants, the Amaryllidæa, Iridæa, &c. By his much lamented death the gardening community have sustained a considerable loss, and which in some respects is irreparable.

Dr. Lindley observes, in the *Gardeners' Chronicle*,—" We well remember the ardour with which, although suffering from serious illness he took up the plan of a tour in Greece in the summer of 1845, the eagerness with which he examined the scenes so dear to the naturalist and the scholar, or the amount of bodily fatigue which he endured in prosecuting his researches, ascending mountains and climbing precipices from which even a young man might have been excused for turning away. What vigour of body and mind he then preserved may be judged from the little collection of Latin lyrics which he circulated among his friends upon his return to England, loaded with the fruits of his excursion.

" Mr. Herbert died suddenly at his house in Hereford-street, at one o'clock, on Friday, the 28th of May, in the sixty-ninth year of his age, just after the completion of a revision of the species of his favourite Crocuses, and while expecting an artist to make a drawing of the last of the many species of Ophrys which he had picked up in his Mediterranean excursion. We are much indebted to a friend for the following memoranda respecting the kind-hearted, noble-minded subject of these remarks :—

" ' William Herbert, the deceased Dean of Manchester, was the fourth son and fifth child of Henry, first Earl of Carnarvon, and was born January 12, 1778. He commenced his public education at Eton, and was still at that school in 1795, when he sent to the press the collection of poems called Musæ Etonenses, of which he superintended a second edition in the present century. This work continues very popular, as well for the intrinsic beauty of no small portion of its contents, as for the high rank or great subsequent celebrity of many of its juvenile authors. Its editor removed to Oxford, where he obtained the Latin prize on the subject Rhenus. In 1801 he printed Ossiani Darthula, &c., a small volume of Greek and Latin poetry. His Miscellaneous Poetry, in two volumes, 1804, was distinguished from similar effusions by containing (in the entire second volume) the first elaborate and truly critical illustrations of the ancient Scandinavian or Norse literature that had appeared in England; the attempts of one or two precursors in that line having been merely popular and trivial. Versions from the German and Portuguese, with original compositions in the Danish, Italian, and Spanish, evinced his extensive command of languages, not, however, extending to any of the oriental tongues. About this period of his life he contributed articles to the Edinburgh Review, unconnected with any political or other bias of that work, but devoted to the interests of learning. The most important in its bearings was the review of Mitford's Harmony of Language. One of the most generally esteemed of his poems, entitled Helga, in seven cantos, was printed (with Vala and Brynhalda) in 1815, and a second edition some years afterwards. Hedin, and the Wanderer of Jutland, were published in 1820 and 1821. The heroic poem of Attila, King of the Huns, in twelve books, accompanied by an historical treatise, was the fruit of the occasional labours of many years, and appeared in 1838. In 1842 Mr. Herbert, then become Dean of Manchester, reprinted, in two volumes, a collection of all his previous unscientific works, except Attila. Last year, 1846, there appeared, uniform therewith, a thin volume, containing The Christian, a poem, as well as various poems and criticisms connected with classical literature, and manifesting full vigour and clearness of mind, in the midst of obvious bodily decay. He was ordained in or about 1814; but his professional duties lay, till his latter years, in a rural village, and his pen was not much devoted to theological labours, though a sample of his long religious and pastoral cares was given to the public in a small number of printed sermons.

"'The Dean of Manchester was early and constantly attached to natural history. In youth he was an indomitable pedestrian and an excellent shot, and made his gun subservient to the study of ornithology, as well as his pencil and paint-brush, with which he was tolerably expert. The edition of White's Selborne, published by Professor Rennie, in 1832, contains many closely printed pages of his ornithological observations; and the title-page gives a spirited specimen of his draughtsmanship. In more domestic periods of life, the science of botany, and the art of horticulture (two very different things), were pursued by him with great success. The Botanical Magazine and Register received from him frequent communications. His greatest work in this line, The Amaryllidaceæ, accompanied with a treatise on hybrid intermixtures, was published in the year 1837; and such leisure as remained to him, in the succeeding years of connexion with a great manufacturing city, and of declining strength, was employed on the Iridaceæ. In this work, which, had longer time or better health been granted to him, would have been as complete as the former, a progress has been made which may probably be thought sufficient to render its publication acceptable to the naturalists of this and other countries. A foretaste of this work appeared in his Crocorum Synopsis, in the miscellanea to the Botanical Register for 1843, 1844, and 1845. William Herbert was beyond all other persons instrumental in establishing and rendering popular the botanical theory of hybridisation among plants; as he was also among the earliest, and one of the most eminently successful, of those who applied it to horticultural practice. Upon the phenomena of hybrid intermixture he mainly founded those conclusions at which he arrived concerning natural classification, and the doctrine of genus and species. They will be found embodied in an essay on Hybridisation amongst Vegetables, in the Journal of the Horticultural Society. On the last day of his life (Friday, May 28th, 1847), and just five hours before its close, he addressed to the writer of these lines a description of an undescribed flower, from the Morea, sufficiently accurate even for publication, and in a clear handwriting. The combination of philological learning with physical, in this author, must be acknowledged to have been peculiar, and of rare example. Nothing is here said of his principles and disposition, because he was well known to numerous surviving friends, and because he who is now left the only one (out of many that we were) in this sad and changeful world, had rather leave that office to others.'"

RULES FOR GARDENERS.

Study to produce, in perfection, vegetables, fruits, and flowers in their proper season. Be careful of everything put into your charge. Let all your operations be performed with neatness, and endeavour to preserve this general appearance in the grounds, gardens, and houses under your control. Never defer until to-morrow what ought to be done to-day: time and nature will not wait, and the proper season will be neglected; nothing is gained by procrastination, but a great deal lost. Be punctual in hours of attendance, and waste no time during working hours. Care, attention, and management do more business than strength and expenditure. As far as practicable, finish one piece of work before another is commenced. Bear in mind self-improvement. Exercise the memory on all occasions, and anticipate the wants of every season. Provide against the contingencies of the weather: have some work in reserve for a rainy day. Read these rules over frequently, and try to keep them in your recollection.—*Gardeners' Chronicle.*

ON GROUPING FLOWERS.

Calling at the beautiful gardens at Brooklands a few days back, I was much pleased with the neatness and display effected. I saw, too, what was fully realized of the following descriptive character given in a recent number of the Journal, viz.:—"There are two points in connexion with the groups of flower-beds at Brooklands, especially that on the south front of the house, which deserve especial mention. The beds are formed on the grass; they are few in number, and simple in form; not crowded together, in order to produce or work out an elaborate design, but distinct, with a good breadth of grass supervening between them; the effect of this is that every bed *tells*, and the whole group bears the impress of simple, solid beauty; there is none of that confused and tawdry effect which results from the crowding together of objects gay and beautiful in themselves, but lost—not properly seen or appreciated—when presented to the eye without due relief. Another practice adopted at Brooklands is to plant the opposite beds, of a formal design, with the same kind of plant; the effect of the group can never be so well wrought out by adopting different plants, even though of similar habit and colour, as when the identical kind of plant is used: thus, whether there are two or four opposite beds, they are all filled with the same individual kind, and rendered as uniform as possible, by obtaining precisely similar treatment. Those who fancy that, under the circumstances, a variety would have a greater charm than uniformity, should remember that groups of beds of this kind are viewed as a whole; it is the mass of colour, not the individual plants, which is observed; and a proper balancing of the parts is seldom realised when this plan is not followed."

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

AURICULAS and Polyanthuses, Carnations, Pinks, &c., should be placed in their winter quarters, in a dry, sunny, sheltered spot, but, at the same time, where a free circulation of air can be admitted on all proper occasions. The surface soil must be loosened, and a slight sprinkling of fresh compost be spread over it. Any plants out in the open beds, as Lobelias, &c., should be taken up and potted for winter preservation in pits, frames, &c. In taking up the bulbs of Tigridias, let all the soil be retained that will adhere, and allow them to be preserved therein; it will gradually dry, and they will be preserved very perfect. Chrysanthemums grown in the open ground, and required for blooming in-doors, should be taken up as entire as possible, and be potted; with due care they will bloom fine. All tender kinds of plants, as Scarlet Geraniums, Verbenas, in fact, every kind requiring winter protection, should be housed *immediately;* it is bad policy to put off a single day longer. Already we have had frost which has injured the tender things, in some places very severely; it is very probable a sudden and severe visit will soon occur. All plants like light; place them as near to the glass as convenience will allow, the farthest off the worst. Tender Roses, grown out of doors, should have protection over the roots, &c., or be taken up and housed.

ROSES may be planted by the middle of the month; they will strike fresh root before the severer weather occurs, and bloom better next season. In the excellent work on the Rose, by Mr. Paul, issuing in monthly parts, are the following remarks on soil and manure; he agrees with Mr. Rivers on the utility of burnt earth, especially in heavy soils, or where it is not well drained:—" Earth may be burnt at any season of the year. It has been the custom here, for some years, on the decline of spring, when the operations of pruning, grafting, &c., are ended, instead of suffering the rough branches to lie about, presenting an untidy appearance, to collect them in a heap. A wall of turf, about three feet high, of a semicircular form, is then built round them. The branches are set on fire, and, when about half burnt down, sea-weeds, and such rubbish as collects in every garden and will not readily decompose, are thrown on the top, and earth is gradually cast up as the fire breaks through.

" During the first two or three days great care is requisite to keep the pile on fire. Here is the point where many fail; they allow the flame to break through and expend itself before the heap is thoroughly kindled. Constant watching is necessary at this juncture. As the fire breaks through, a layer of bushes and weeds should be added, and then a layer of earth. Follow up this plan, and the fire will spread through the whole heap; and any amount of earth may be burnt by continually adding to those places where the fire appears strongest. The soil burnt here is the stiffest loam that can be found within our limits, and which is rather of a clayey nature; also turf from the sides of ditches and ponds, in itself naturally sour and full of rank weeds.

"Burnt earth has been found beneficial in every instance where applied. In black garden mould, rather wet, in which Peach-trees were disposed to sucker and canker, despite of the use of various manures, two or three annual dressings of it appear so to have altered the nature of the soil that they now grow clean, vigorous, and healthy, are free from suckers, and produce roots completely matted with fibre. The like success has attended its application to various other trees."

So again with manure. The author is not misled by the excellence of stable manure to recommend it for light land; on the contrary, he is perfectly aware of the bad effect produced there by its mechanical action, and well observes—

"That stable manure, which is excellent in most cases, and the kind in general use for Roses, is not of the best description *for light soils*. Its tendency is to render them still lighter; and, if it can be dispensed with, we think it desirable to do so. Manures should be applied here in a more concentrated form. Cow-dung is excellent, especially for the tea-scented Roses; and pigeon-dung, rabbit-dung, and night-soil, are all great improvers of light soils."

DAHLIAS.—Let the crown of the roots be covered, heaping a few inches deep of soil around the stems.

SHRUBS of all kinds may now be planted (see remarks in our September Calendar).

SHRUBS, &c., FOR WINTER BLOOM.—Such as are to bloom early should be gradually prepared, potted immediately, if required, and by the middle of the month introduce such as are desired to bloom by Christmas into the house or pit. The kinds which are well deserving such attention are Roses, Honeysuckles, Jasmines, Azaleas, Kalmias, Persian Lilacs, Andromedas, Carnations, Pinks, of which Anne Boleyn is the best, Rhododendrons, Rhodora, Deutzias, Ribes, Spiræa prunifolia, Mezereum, Gardenias, Cupheas, Heliotropes (the new blue is fine), Scarlet Pelargoniums, Cactus, Eranthemums, Justicias, Salvia, Gesnerias, Corræas, Chinese Primrose, Aconites, Mignonette, Primroses, Cinerarias, Stocks, Persian Iris, Crocus, Cyclamens, Sweet Violets, Hyacinths, Lily of the Valley, &c.

IN THE GREENHOUSE, &c.

If the stock is not housed, it ought to be done immediately, and, as has been observed in a former Calendar, much judicious attention is necessary in the placing properly a mixed collection of plants. Care must be taken so that one plant may receive something like its proper treatment without interfering materially with the well-being of its neighbours; and whilst the tender ones must be placed in the best part for protection from cold wind, &c., as Polygalas, Pimeleas, Leschenaultias, Aphelexis, Baroneas, Gompholobiums, Croweas, and

Diosmas, are always injured by being placed where there is a current of wind. Let each plant have all the space possible, and the robust large-leaved kinds, and the very slender delicate sorts, should be kept as separate as can be arranged, so as to allow a due circulation of air. Always be careful that the pots, &c , be perfectly clean before arranged for their winter situation. Re-pot Cinerarias, &c. Let Camellias which are to bloom early be placed in a warmer situation, also any Chinese or Indian Azaleas, so that they may be gradually advancing. In watering the stock of plants, let it be done, as far as practicable, in the early part of the day, so that any excess may be dried up before evening, and damps be avoided, or otherwise mouldiness will ensue. Give all possible air in suitable weather.

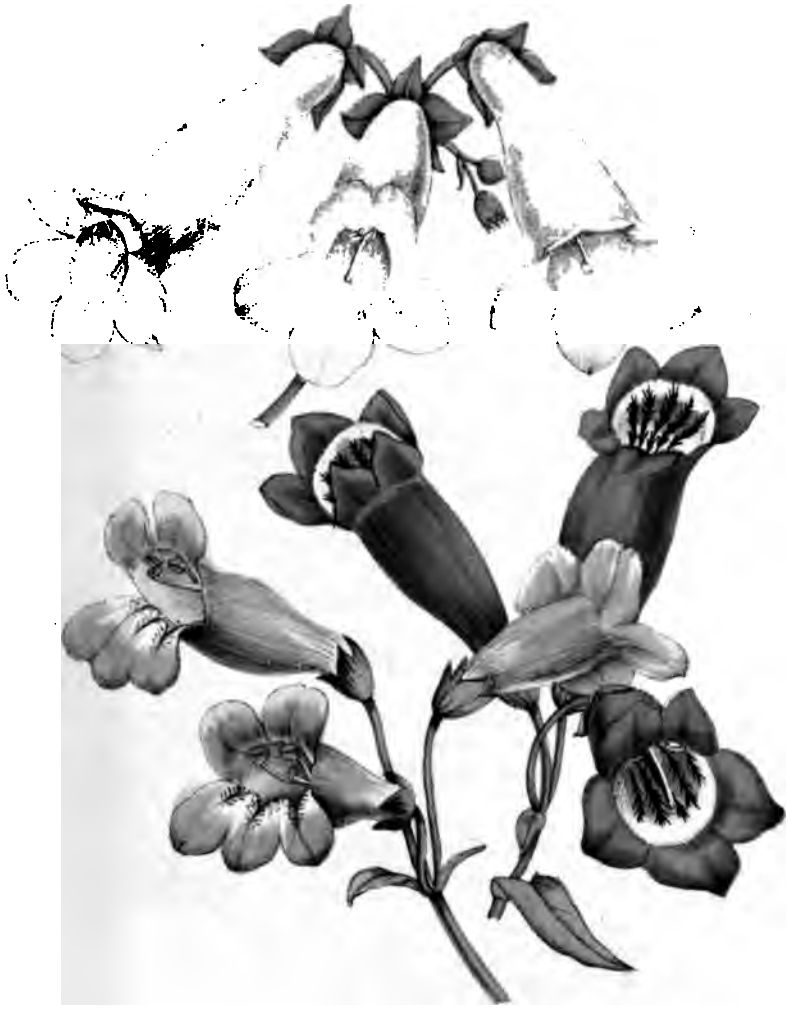
ON PLANTING OUT PINKS IN BEDS.

BY DIANTHUS.

The present being the period of planting Pinks in beds, and being a successful exhibitor of this lovely flower at all the first-rate shows held in London and its neighbourhood, I am induced to forward the particulars of my method of forming and planting my beds.

I select a fresh piece of ground every season; having fixed upon it, I mark out the bed four feet wide upon its surface. I lay four inches thick of two years old cow-dung, which is dug in a spit deep, being careful to incorporate it well with the soil. Cow-dung is much superior for growing the Pink in than any other manure; it is cool as well as enriching, and, whilst the flowers are more vigorous, they possess the colours, &c., more perfectly, and the white grounds are pure. I take care to have the sides of the bed about five or six inches higher than the path, which is two feet and a half wide. The surface of the bed is crowned, having the centre raised and gradually sloping to the sides, so as to admit of any superfluous water running off.

In planting I am careful to retain as much soil to the ball of roots as possible. I arrange the plants so that they are in squares, each plant being six inches apart. A row of these squares is planted along the crown of the bed, and the sorts are the tallest-growing flowers. Two other rows of squares are planted, that is, one on each side of the centre one, and midway between it and the edges of the bed. By this arrangement the squares can be easily covered over by glass or other preservative, when requisite; and the squares being formed crossways of the bed, in what is termed the quincunx manner, it allows that facility much better than if the three squares across the bed were in a line. I always have each square of four plants the same kind. In planting I have them put in so that the soil reaches up to the lowest leaves, but not deeper, and have it pressed closely around the stem of each, so that the plants are firm in their situations. After being planted they are properly watered, to settle the soil around the fibrous roots. By this attention, and the subsequent management required at their various stages, I have grown the flowers to a state of perfection which has not yet been exeeeded.



Pentstemon gentianoides alba.
Pentstemon Gordoni. Pentstemon Mc. Ewani.

FLORICULTURAL CABINET

NOVEMBER, 1847.

ILLUSTRATIONS.

GARDENIA DEVONIANA.

IN our Volumes for 1845 and 1846, we figured the fine new species Gardenia Stanleyana and G. Forsythiana, and now we have the gratification to introduce the present noble species, and which, with the above named, will become universal favourites.

G. Devoniana is a native of Sierra Leone. It is a beautiful evergreen shrub, having much the habit of G. Stanleyana, the flowers, too, having a similar fragrance. The plant can be made to bloom in a dwarf state, by stopping the leading shoots and inducing the production of lateral ones.

The cultivation of Gardenias, although so much esteemed for their beautiful and highly fragrant flowers, appears to be generally neglected, except by persons around London, who grow them for the sale of cut specimens, which are greatly in demand in the metropolis. These persons cultivate them with great success. One very essential particular they attend to is, to give the plants a periodical rest, and afterwards excitement. This is effected by keeping them in the winter season, or after they have completed their growth, in a cool greenhouse, or pit, to which no more fire heat is applied than just sufficient to preserve them from frost and excess of damp. During this period very little water is given—just enough to keep the soil from drought. As soon as the buds begin to swell the plants are well watered, and removed to a pit or frame, having a gentle bottom heat, with tan or dung. The bottom heat is especially essential to success. In this situation they do not require much water at the roots at first, as the moisture from the tan or dung, and an occasional syringing in sunny weather, is nearly sufficient. As the flowers expand the quantity of water is gradually increased, and the plants are removed, when in bloom, to the greenhouse, or moderate stove, &c. When the flowering is over, the plants are removed to a close frame, in order to mature their growth. The potting is usually performed after blooming, in order that the perfecting of the young wood may be promoted. In a strong loam, with about one-third peat or leaf mould, they flourish admirably. A gentle bottom heat, and a close moist atmosphere whilst swelling the flower buds, and making new wood, are indispensable, and the opposite treatment is pursued during their season of rest.

The above mode of culture is that so successfully practised with those delightful fragrant species gradicans and florida, whose perfume is diffused in the bouquets in the London flower marts during the spring and the early part of the summer.

NOTES ON NEW OR RARE PLANTS.

ABELIA FLORIBUNDA—FLORID ABELIA.

Caprifoliaceæ. Pentandria Monogynia.

A native of Mexico, which requires to have a treatment between a stove and a greenhouse. It is a pretty little erect shrub, growing freely in sandy loam, peat, and leaf-mould. It blooms during the entire summer season. The flowers are produced in numerous pendulous clusters of two or three blossoms in each. They are similar in form to a Trumpet Honeysuckle; of a beautiful bright rosy-pink colour. It may be procured cheap at the public nurseries, and it well merits a place in every collection, being neat and handsome. (Figured in *Bot. Reg.*)

CHIRITA WALKERIÆ—MRS. WALKER'S CHIRITA.

Didymocarpæ. Didynamia Angiospermia. (Syn. *Chirita Mooni.*)

It is a native of Ceylon, where it was discovered by Mrs. General Walker. It has bloomed in the hothouse in the Royal Gardens of Kew most of the past summer. The stem is shrubby, succulent, stout, branching. Each flower is two inches and a half long, between funnel and bell shape; a rich violet-purple; the tube pale yellowish-white, and inside the mouth has a deep yellow circle. It blooms during the greater part of summer. A handsome flowering species, and deserves a place in any collection. It may be procured very cheap, and its pretty Foxglove-like flowers have a beautiful appearance. (Figured in *Bot. Mag.*, 4327.)

COLUMNEA CRASSIFOLIA—THICK-LEAVED.

Gesneriaceæ. Didynamia Angiospermia.

Supposed to be a native of Mexico. It is the most beautiful, as well as the largest flowered of this genus. It requires the heat of the stove. The plant grows about a foot high. The flowers are produced singly along the stem, erect; each blossom is tube-shaped, curved, near five inches long, hairy, and a bright scarlet colour, with yellow streaks in the throat. It has bloomed in the collection of the Royal Gardens of Kew. (Figured in *Bot. Mag.*, 4330.)

ECHEVERIA RETUSA—BLUNT-LEAVED.

Crassalaceæ. Decandria Pentagynia.

A native of Mexico. It is a pretty dwarf greenhouse half-shrubby plant. The flower stem rises about a foot high, and bears at the summit a large compact panicle of handsome crimson-coloured flowers. Each blossom, hanging somewhat like a small Columbine flower, with its rich coloured outside and yellow inside, has a very pretty appearance. (Figured in *Bot. Reg.*, 57.)

ECHINOCACTUS CINNABARINUS—CINNABAR-FLOWERED.

Cacteæ. Icosandria Monogynia.

In the splendid collection of Cacteæ at the Royal Gardens of Kew. It is globose-formed, flowering freely. Each blossom is nearly four inches across, a very rich cinnabar-crimson colour, with the margin of the petals lighter. It is a very handsome species, and the large flowers of so small a globe give it a striking appearance. (Figured in *Bot. Mag.*, 4326.)

EPACRIS TAUNTONIENSIS—THE TAUNTON EPACRIS.

Mr. Ball, nurseryman, of Taunton, raised this beautiful hybrid, we are informed, betwixt E. grandiflora and E. impressa. The flowers are of bright rosy-crimson colour, with the five-parted mouth of a pale pink. A single blossom is about three-quarters of an inch long. It is a very handsome variety, and well deserving to be in every collection. (Figured in *Pax. Mag. Bot.*)

HENFREYA SCANDENS—CLIMBING HENFREYA.

Dr. Lindley constituted a new genus, to which the name of Henfreya, in honour of Mr. A. Henfrey, has been applied. It belongs to that group of acanthaceous plants of which Ruellia is made the type. The species under notice is a stout climbing plant, but does not apparently attain a great height. It has large, opposite, elliptic, somewhat leathery, shining leaves, and racemes of large white sweet-scented flowers, which have a funnel-shaped tube, and two-lipped limb, the segments of the latter nearly equal. It is a native of Sierra Leone.

HIBISCUS GRASSULARIÆFOLIUS—GOOSEBERRY-LEAVED HIBISCUS.

Seeds were sent from the Swan River colony, and plants raised in the Royal Gardens of Kew. It is a shrub growing three feet high, and if planted and trained against a wall is a beautiful open-border plant, blooming all the summer season. Each flower is four inches across, of a rich blueish-purple colour. Blooming profusely renders it very showy. (Figured in *Bot. Mag.*, 4329.)

HOYA CAMPANULATA—BELL-FLOWERED.

A native of Java, where it inhabits the mountain thickets, and blooms all the year round. Its habit is that of a thin-leaved Hoya. The flowers are borne in numerous-flowered umbels; they are bell-shaped, rather short and spreading, about three-quarters of an inch across, a greenish-yellow colour. It is in Messrs. Veitchs' collection. (Figured in *Bot. Reg.*, 54.)

ISOPOGON SPHÆROCEPHALUS—ROUND-HEADED.

Proteaceæ. Tetandria Monogynia.

A native of the Swan River colony. It is a free-growing greenhouse shrub. The heads of the flowers are terminal, yellow. It blooms early in the spring. Each head of flowers is about an inch and a half in diameter. (Figured in *Bot. Mag.*, 4332.)

RIBES MENZIESII—MENZIES' GOOSEBERRY.

A hardy shrub from California. It grows from four to six feet high, in any common garden soil. The drooping racemes have from one to three flowers in each; they are of a fine crimson colour. A single flower is about half an inch across. The petals recurve very similar to some of the Clematis.

SUCCOLOBIUM MINIATUM—ORANGE-RED.

Orchideæ. Gynandria Monandria.

A native of Java, imported by Messrs. Veitch. The flowers are produced in spreading racemes, about ten blossoms in each, of a pretty orange and red. A single flower is about three quarters of an inch across. (Figured in *Bot. Reg.*, 58.)

SIPHOCAMPYLUS GLANDULOSA—THE GLANULAR.

A native of Bogota. Seeds of it were sent by Mr. Purdie to the Royal Gardens of Kew. It requires the same kind of treatment as the other species, growing and blooming freely in the greenhouse all the summer season. Each flower is about two inches long, of a beautiful purple colour. It is a very handsome species, and well merits a place in every greenhouse. We find it easily cultivated as a dwarf plant by stopping the leads, and thus bloomed it is particularly neat. (Figured in *Bot. Mag.*, 4331.)

ON THE LOVE OF FLOWERS.

(*Continued from page* 251.)

THE climate of this country is not, perhaps, the most favourable for the production of flowers; yet we have a power of enjoying those we have, which inhabitants of warmer climates often have not. In the East, it is true, the country is adorned with the most magnificent flowers, springing up spontaneously and abundantly; whole fields are brilliant with tulips, anemonies, and roses; but the bright sun, which gives them life and beauty, forbids man to walk abroad during many hours in the day, from its insufferable heat. Persia is, perhaps, supereminently the country of flowers, of the rose in particular. Japan, too, has magnificent flowers; which, to be able to enjoy, the people have a quantity of them within doors. The Japanese are passionately fond of flowers, and frequently name their women from them. In Constantinople they are very much neglected. Tournefort remarks, that the Turks take little care of their gardens in general, bestowing their attention almost entirely upon their melons and cucumbers.

Wilson describes the desolate appearance even of a *cottage* garden entirely neglected:

————————" O'er the green,
Once smooth before the porch, rank weeds are seen,
Choking the feebler flowers: with blossoms hoar,
And verdant leaves, the unpruned eglantine
In wanton beauty foldeth up the door.
And through the clustering roses that entwine
The lattice window, neat and trim, before,
The setting sun's slant beams no longer shine.
The hive stands on the ivied tree,
But murmurs not one single bee.
Frail looks the osier seat, and gray,
None hath sate there for many a day;
And the dial, hid in weeds and flowers,
Hath told, by none beheld, the solitary hours."

To an attentive observer of their habits, flowers may be made to answer the purposes of the clock, the calendar, and the barometer. Some persons have calculated, to a day, the time of the year when certain trees resume their foliage in a given situation; the same calculations may be made as to the blowing of flowers, and the hour of the day is indicated by many. "Those who are but in a small degree acquainted with botany," says Thunberg, "need not be told that, by the opening and closing of flowers, one may frequently know with certainty, as from a watch, what hour of the day it is, as well as if the weather will be fine or rainy. Plants of this kind are common on the African hills. The *Moræa undulata* never opens before nine in the morning; and before sunset, at four in the afternoon, it closes again. The *Ixia cinnamonea* opens every evening at four, and exhales its agreeable odours during the whole night. The approach of rain is announced by various bulbous plants, such as the *Ixias*, *Moræas*, *Irises*, and *Galaxias;* the tender flowers of which do not open in the morning, if rain is to be expected soon; and if a shower is to fall in the afternoon, they close some time before."

"The Hottentots," says the same author, "do not seem to have any knowledge, neither do they take the least account of the course of nature. The only thing they remark is, that every year they see the bulbous plants push out of the ground, blossom, and decay; and according to this almanack they reckon their own ages."

Nor is it only from the bulbous plants that we take these warnings of weather, or learn the hour: the Marvel of Peru is called the Four-o'clock-flower, from its opening regularly at that time. Many of the species of Convolvulus and Campanula, also, have their stated hours of rest; and a variety of other plants too numerous to mention. It has been observed of a species of broom, that it may with propriety be termed an American clock, because it grows there in every pasture, begins to display its yellow flowers every morning at eleven, is fully open by one, and closes again at two.

"Till morning dawn, and Lucifer withdraw
His beamy chariot, let not the loud bell
Call forth thy negroes from their rushy couch:
And ere the sun with mid-day fervor glow,
When every broom-brush opes her yellow flower,
Let thy black labourers from their toil desist:
Nor till the broom her every petal lock,
Let the loud bell recall them to the hoe.
But when the jalap her bright tint displays,
When the solanum fills her cup with dew,
And crickets. snakes, and lizards 'gin their coil,
Let them find shelter in their cane-thatched huts."
GRAINGER'S SUGAR-CANE.

This poetical mode of reckoning time was used by Adam in Paradise:

"As in a shady nook I stood behind,
Just then returned at shut of evening flowers." PARADISE LOST.

Shakspeare counts time, also, by the succession of the seasons:

"To me, fair friend, you never can be old,
For as you were when first your eye I eyed,
Such seems your beauty still. Three winters cold
Have from the forest shook three summers' pride;
Three beauteous springs to yellow autumn turned.
In process of the seasons have I seen
Three Aprils' perfumes in three hot Junes burned,
Since first I saw you fresh which yet are green."

The same mode was used by that young poet—in losing whom we have lost so much fine poetry that he could not but have written—Keats:

"Many and many a verse I hope to write,
Before the daisies, vermeil-rimmed and white,
Hide in deep herbage; and ere yet the bees
Hum about globes of clover and sweet peas,
I must be near the middle of my story.
O may no wintry season, bare and hoary,
See it half-finished; but let autumn bold,
With universal tinge of sober gold,
Be all about me when I make an end." ENDYMION.

The fashion, so long prevalent in this country, of adorning the hair with artificial flowers, is in some countries improved upon by the use of the natural. Thunberg describes it as a common custom in Batavia; and Southey, speaking of the women of Paulista, in Brazil, says, "Flowers were an indispensable part of the female head-dress, a natural fashion in a land where the sweetest flowers blossom in all seasons; but the beauty of the costume was destroyed by the odious custom of wearing powder, with which the Paulista women of all ages loaded their heads." Again, he says: "When a stranger is introduced to a Brazilian lady, it is an act of courtesy in her to take a flower from her head and present it to him, and he is expected to return the compliment in the course of his visit."

In some parts of Germany the ladies wear natural flowers, particularly the beautiful blue corn-flower (*Centaurea Cyanus*).

A friend has obliged me with the following lines, paraphrased from the Greek of Meleager. "This delicious little Greek poem," says he, "is one of those which I always seem to scent the very odour of, as if I held a bunch of flowers to my face."

"A flowery crown will I compose—
I'll weave the crocus, weave the rose;
I'll weave narcissus, newly wet,
The hyacinth, and violet;
And myrtle shall supply me green,
And lilies laugh in light between:
That the rich tendrils of my beauty's hair
May burst into their crowning flowers, and light the painted air."

THE PELARGONIUM CITRIDORA. (Citron-scented.)

The Citron-scented Geranium (as it is still termed) was once almost a universal favourite, and an inmate of, very probably, nearly every greenhouse; I am sorry to have to state it is now very seldom to be seen in the collections of this country. The reason for such neglect may have arisen from the circumstance of the flowers having but little show, or from some slight difficulties in its successful culture. Although these particulars may have operated so unfavourably, yet the sweet fragrance of its minute leaves alone entitles it to every attention, and to enjoy its delightful perfume most amply repays for all labour bestowed upon it. There is, too, the valuable acquisition it affords in its supply to furnish bouquets during the dull months of winter.

In winter the plant is very liable to injury from dampness, but this may be obviated, as it likes to dwell in a *cool* and *dry* atmosphere at this season. Cuttings, too, when in the process of striking, are very apt to damp off, and require much care and attention during this stage of treatment. I have often given a sprig of it to inexperienced cultivators, and, allured by its sweet-scented properties, the receiver has attempted to strike it, by inserting it quite carelessly by the side of any old plant growing in a flower-pot, in poor garden mould, and in numerous instances I have seen success follow. The most successful way I have proved in striking the plant is by inserting the cuttings into gravel which is finely sifted, adding to it a small portion of silver sand, and by keeping them air-tight they strike most freely. The easiest and surest way to produce a stock of plants is by seed. It must be sown immediately it is ripe in flat pans, in the above-named mixture of gravel and sand, and potted singly as soon as strong enough. The plants do not come quite so true the first season as by cuttings, but age will be the cause of their becoming like the parent, if the seed be true to kind. This true character may be obtained by having a plant grown in a house where no other Pelargonium is, or at some distant situation.

I shall be pleased if my bringing this lovely, fragrant plant to the notice of the readers of the Cabinet result in promoting a more extensive culture of so charming a class. I have recently discovered, in a collection of Pelargoniums near my own residence, the following kinds, all of which possess the very distinctive perfumes the title indicates, viz., P. rose-scented, lemon-scented, peppermint-scented, nutmeg-scented, musk-scented, violet-scented, lavendar-scented, orange-scented, and apple-scented. The flowers of some of these varieties were of fine form and size too, and I have no doubt, if proper attention be given in impregnating from superior sorts, that a race of first-rate kinds, having the fragrant properties of its parent could be produced.

ON HEATING PLANT STRUCTURES.

(*Continued from page* 258.)

The following letter refers to the above subject, and appeared in the *Gardeners' Chronicle* a short time previous to the preceding remarks of Mr. Hazard's being inserted:—

" (*To the Editor.*)

" Sir,—I have been some time waiting Mr. Hazard's reply to Mr. Meek's letter, which appeared on the 19th September. The reason of his silence I am at a loss to conjecture, as he could, I am convinced, easily prove that the 'icy winds' of a winter's night do not affect his stove in any way to lower the temperature of the house. I should not have made these remarks but from a conviction that it is our duty, as practical men, to bear testimony to a system which, with a little variation, is one you have so ably advocated in your columns from time to time. With you it is known as Polmaise, but here as 'Hazard's system of heating.' When I first heard of Mr. Hazard's improvements in warming horticultural buildings, in the year 1843, both Mr. Mayes and myself were strongly opposed to the plan of heating by hot air, as we thought, in the first place, it would not be congenial to the growth of plants; and, secondly, that no gardener would be enabled to keep anything like an equal temperature in severe weather by such a system, and in our minds we pitied those who were about to adopt it; indeed, we felt so fully confident it would not answer, that whenever our opinion was required, we invariably recommended the plan which we then considered the best, viz., hot water either in tanks or passing through pipes within the house. Judge, then, our surprise one frosty morning, in the winter 1844-45, when, on visiting for the first time the stove-house at Somerset-house, Clifton, heated by Mr. Hazard's patent apparatus, we found the temperature at 70°, although the gardener assured us that he had not touched the fire since seven o'clock the previous evening; the plants were in a most flourishing condition, and far superior in health to any in the neighbourhood. Being desirous of thoroughly testing the system, we repeatedly called, and also sent our foreman, and invariably found a temperature of the house from 60° to 70° during the coldest nights of that most severe winter. After this satisfactory result, we were desirous of trying the system in our own establishment, and having at that time a house heated by flues, we removed them, and erected Mr. Hazard's patented apparatus, with its vapour appendage, in its stead. The house is in an exposed situation, has a slant roof, with lights in front, measuring 42 by 13 feet in the clear. On each side and at the bottom of the house is a striking-pit, with slate bottom, leaving a two-feet walk down the centre; the warm air passes in large quantities under the pit, which forms a good bottom-heat, and makes its escape into the house through ventilators at the sides in such quantities as the gardener may require. Since its introduction we have used this house for forcing flowers in winter, such as Roses, American plants, Pinks, &c. &c., and can confidently state that we have never had them so fine under any other mode of heating, more particularly the Roses, which were exceedingly fine, many of the moss producing from twenty to twenty-five flowers on each plant. When the forcing season is over, we then fill the house mostly with Amaryllis, to give them their summer's growth. Amongst these we place specimen stove plants, such as Allamanda, Dipladenia, Ixora, Bayetta, Clerodendron, Turnera, Inga, &c., all of which flourish and produce abundance of flowers, far finer than in our houses heated on the old principle of steam, fire-flues, &c. We also find some orchids much improved since they were removed into this house, especially Cattleyas, of which we have now a handsome specimen in C. intermedia, in fine bloom, and which has been so for the last six weeks. We have always been enabled to keep the house at a uniform temperature from 60° to 75°, and the fire requires attendance merely night and morning; the cost of fuel does not exceed three-pence per day. Such is our good opinion of this system over all others, that we wish the whole of our houses were heated as this experimental one is. We shall be happy to show it to any one who may wish to inspect it.

" *Durdham Down Nursery,* " James Garraway,
" *Bristol.*" " For Garraway, Mayes, and Co.

With the above the following was sent:—

" Church Warming on Hazard's Principle.

" It may be interesting to your readers to have the following account of an attempt to warm a church on Mr. Hazard's plan. The experiment has been in every particular so entirely successful—the original cost, compared with that of hot-water heating, so small—and the consumption of fuel so trifling, that I think it but fair to Mr. Hazard to endeavour to call public attention to the great merits of his invention. The church here is about one hundred feet by fifty feet, in the widest part, and twenty-five feet high, consisting of a nave, north and south aisles, and chancel; it used to be very cold and very damp. The construction of the church has given great facilities for erecting the apparatus without producing any disfigurement: outside there is nothing visible, except from one point; and, inside, all that appears are the grates in the face of the walls through which the heated air is poured into the church. There are five of these; one in the north aisle, one in the nave, two in the chancel, and one in the vestry. Some parts of the church are distant from fifty to sixty feet from the nearest grate. The apparatus is one of moderate size; four rows of five pipes, each six feet long; the chamber containing them is about eight feet by three feet, and five feet high. It has been in operation about six weeks; for the last four weeks the fire has been lighted three times a-week only. The results are—1st, That the church is most thoroughly dry; there is no trace of damp, even on the Steinton-stone floor, though the climate is very damp and the soil full of water; we were deterred, indeed, from attempting to carry the hot-air flues under the floor to different parts of the church by the difficulty presented by the water. 2nd, That, with an outside temperature of 30°, the temperature of the church was 50°, and this when the works were scarcely dry. Since then we have commanded a steady and agreeable warmth of from 52° to 55°; yesterday, with a frost outside, the thermometer in the centre of the church stood at 61°. After many trials, I have observed very little, if any, difference in the warmth fifteen feet from the grates and fifty feet. The cold air is drawn off from the floor of the church by a drain passing into the hot-air chamber, but the principal supply is by a cold-air drain outside the church. There is no smell whatsoever; the temperature is that of a large room, equally and comfortably warmed. The operation is very quick. I have found in an hour and a half from the time that the first spark of fire was put into the fire-box, the heated air coming in at the principal grate at 172°; it makes itself sensibly felt at the grates in half an hour. The greatest heat I have observed (as noted by the thermometer hanging within an inch of the face of this grate, but not touching it in any part) has been 212°. We burn anthracite and sifted cinders; the latter do the best when the fire is once started. On the whole, I think that Mr. Hazard's invention may be said to be very complete, very simple, very easy of management, and very certain, as well as speedy and effectual in its operation; by no means expensive in its first erection; very little liable indeed, if at all, to get out of order; and requiring a very small quantity of fuel, and very little attention, to make it do its work thoroughly. "GEORGE DENISON.

"*Vicarage, East Brent, Somerset.*"

Towards the close of last summer we had a propagating house erected at our Richmond establishment, twelve yards long and four wide. It is what is termed double-roofed, with glass ends, but no upright glass either at the front or back. The floor is two feet below the surface of the surrounding ground, and the front, back, and end walls rise to four feet above the ground upon which the wood-work rests. The entrance is at the south-west end. It is heated on Mr. Hazard's system. The fire-place, box, &c., is erected at the north-east corner. The air-drain is at the south-east corner, and the bottom of it is level with the floor of the house; it enters the fire-box where the heated tubes are, and passing upwards and over the several rows of tubes joins the chamber, which is over the air-drain, at the north-east end, and along the front of the house to the end, where is the doorway. The chamber is three feet deep and three wide; it is covered in with blue slate flags, and the brick-work being nine inches higher at the inside, and eighteen at the front wall, a pit is formed, in which bark or sawdust, &c., is put, in order to plunge pots of cuttings therein. The chamber is continued at the opposite side of the house. A pathway three feet wide extends up the house; on its right, in entering, is the heated chamber we have described, and on the left a second one, the bottom of which is level with the floor of the house; this is two and a half feet wide; and beyond it is a third chamber, of which the back wall of the house forms one side, and another one, at two and a half feet from it, inside the house, forms the width of this third chamber. Its bottom is about nine inches above the surface of the chamber number two. The heated air filling these chambers, they are heated to any desired temperature, as high as °, if required. In order to admit the warmed air into the house, ventilators are affixed in the inner sides of the chambers, and as they are the turn ventilators they are readily opened or shut. By this means a regulation of temperature is furnished in the most satisfactory manner. In order to have a moist atmosphere, a pipe enters into the fire-box, and several perforated pipes extend over the heated ones; water being poured into the pipe, is distributed over them, and a steam is readily produced for the house.*

We never saw cuttings of plants take root so early and freely as they do in this house; and the plants which are generally kept in the house grow vigorous and healthy.

The temperature of the house during the severe frost of the winter was 72° at eight o'clock in the evening, and 70° in the morning at the same hour. The difference of temperature in the honse is 1° higher at the end where the fire-box is than at the opposite end where the door is. The cost of coke per twenty-four hours, in the winter, is from three-pence to four-pence, and that estimate formed upon the high price given for it at Richmond, viz., sixpence per bushel. The cost of fuel in the hot-water system with us is four times that of Hazard's. It requires no attention from six or seven o'clock in the evening to eight or nine the following morning.

Hazard's system obviates what is strongly protested against by many persons; it does not admit the air in the house to pass successively and continuously over the fire into the house, but it admits a continuation of fresh air to any definite period, if the mouth of the air-drain be kept open as well as the ventilators in the house, thus providing a suitable atmosphere for the plants to flourish in, and at a cost lower than by any other system we have seen or heard of. The escape of the air out of the house is only by the laps between the panes of glass, and it is found quite sufficient; it gradually and gently passes through, so as to keep the temperature at a sufficient height, and that in a state of equality for a long period.

The entire apparatus is simple and economical, maintains a regular temperature with little attention, and scarcely can be deranged even by the careless. It can be made equally available to the smallest structure as the largest. Mr. Hazard, the patentee, has published a small pamphlet containing observations upon the system, descriptions, and numerous testimonials of approval. In his remarks on the source of heating, which is illustrated by an engraving, he states,—" A is the fire-box, lined with brick, in order to prevent the fire acting immediately on the iron (pipes), so as to injure the surrounding; the heated gases and smoke are then distributed into a series of tubes, and continues to wind its way until it enters the chimney. The outer atmosphere is brought from without by means of an air-drain, enters the chamber below the pipes, and in its upward progress is arrested by the first row of heated tubes, which, being hotter than the others, are considerably lessened in temperature by their receiving the first rush of cold air; it then passes upwards, and over the external surface of the upper rows of tubes, until the chamber becomes, with one uniformly-heated atmosphere, of a genial and healthy nature, ready to be conveyed into the various apartments requiring warmth. The best fuel is coke, or the Welsh stone-coal, known by the name of anthracite. Either of these, with cinders from a common fire, to prevent the other from burning with too great energy, will be found the cheapest of all firing." We have extended our remarks beyond what we intended, but we are confident the system merits all we have said in approval, and with confidence in its utility, and economy in its construction and working, we recommend it to our readers.—CONDUCTOR.

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* We think a tank, in which a due portion of water is poured, being fixed upon the surface of the fire-box, would be better than the pipes which distribute the water. We shall try it in another house.—CONDUCTOR.

THE REPOSE OR SLEEP OF PLANTS.

BY SENEX.

THE alternate state of activity and rest, which appears to be necessary to maintain the body in health and the mind in vigour, is not confined merely to sentient beings, but pervades the whole economy of nature, whether animate or inanimate. The term sleep (a state of rest), as applied to the vegetable kingdom, is used to express a peculiar state of many plants during the night, evinced by a change in the position, generally a drooping or folding together of their leaves or leaflets. The instances of this state of rest are constantly before our eyes. The Lupin drops listlessly the slender fingers of its leaves at dusk, as if to repose from its daily labour. The Four-o'Clock (Convolvulus minor) closes its blue eyelid betimes in the evening, and opens it again as soon as the sun is well above the horizon. In some plants the leaves approach the stem quite close.

Linnæus, speaking of this condition of plants, traces the analogous properties possessed by the subjects which compose the animal kingdom when under the influence of sleep or inactivity. The monkey rests on its side, the camel with its head between the fore-legs, and many birds cover their heads with the wing; so, he remarks, the leaves of plants assume different positions during the night. The object in general appears to be the protection of some more delicate part of their structure from the effects of the night air. Some bend downwards over their blossom; the tamarind closes its leaves over the fruit, the acacia does the same, while the intention in other plants is the guarding the under side of their leaves from injury. It is not to be supposed that anything approaching to the exhaustion of muscular power is the cause of these phenomena; the effect is most probably to be attributed to cold air and the absence of light retarding the circulation of the sap. To these different positions of the leaves Linnæus has applied a variety of names, which would be uninteresting to the general reader.

The most singular instance of this state of plants, and that which first attracted the notice of the great Swedish naturalist, occurred in a species of Water Lily, Lotus ornithopodioides. The plant, being rare, was much prized by its owner, and two blossoms appearing on it, the gardener was particularly cautioned to take care that no accident occurred until more notice could be taken of it. Business prevented its being thought of until the evening, but when it was produced no blossom was visible. The next day the flowers were again seen, but in the evening were not to be found; the third day the same thing again occurred, but after a very minute search each blossom was found hidden under three leaves, as if covered with a pent-house, protected from the air, and quite concealed from the most prying eye. "From this," says Linnæus, "we may see that the structure of leaves is not fortuitous, but destined by an omniscient Creator to answer some particular end."

FLORAL EXHIBITIONS.

ROYAL SOUTH LONDON FLORICULTURAL SOCIETY.

The last exhibition for this season was held on September the 18th, in the gardens of the Surrey Zoological Society. The number of visitors was very great, and we were glad to observe nearly every Dahlia grower of note in town, and from the country, even the very remote parts, there; it is long since we saw an equal number together. The great source of attraction was the favourite flower THE DAHLIA, and the dense throng in the large tents where the flowers were shown evidenced the high estimation in which this unequalled flower is so deservedly held.

The past season has generally been very unfavourable to the Dahlia; the extraordinary ravages of the thrip, and the very varying weather, at last followed by frost early in September, militated against success. The flowers exhibited comprised quite an amazing amount, and we never before saw so many flowers of real excellence exhibited on one occasion. The prizes given were most deservedly merited.

We noticed with much satisfaction the great improvement which has taken place in regard to the properties of the fancy Dahlias. These begin to rival the perfection of self-coloured varieties, both in form of petal and general outline of the flower. Their lively and attractive appearance in borders and shrubberies will make this description of Dahlia a great favourite with all lovers of flowers.

In the *Amateurs' Class*, for stands of twenty-four dissimilar varieties, the 1st prize was awarded to Mr. Howard, of Burnham, for Lady Leicester, Fulwood Glory, Queen of Roses, Standard of Perfection, Miss Vyse, Essex Triumph, Marquis of Aylesbury, Yellow Standard, Queen of Sheba, Admiral Stopford, Gloria Mundi, Princess Radziwill, Prince de Joinville, Minn, Marchioness Cornwallis, Nonpareil, Sarah, Louis Philippe, Beauty of Hants, Cassandra, Essex Rosy Lilac, Beauty of Sussex, Berryer, and Beeswing; 2nd prize to Mr. Hopkins, of Brentford, for Madame Zehler, Essex Triumph, Caractacus, Beauty of Sussex, Louis Philippe, Biondetta, Marquis of Worcester, Scarlet Gem, Eximia, Yellow Standard, Cleopatra, Miss Sarah, Felix, Marquis Cornwallis, Berryer, Beeswing, Princess Royal, Northern Beauty, Captain Warner, Orange Superb, Enterprise, Queen of Roses, and Nonpareil; 3rd prize to Mr. Proctor; 4th prize to J. Edwards, Esq., Holloway; 5th prize to Mr. Frisby, gardener to the Rev. H. Chaplin. Class 1, for twelve blooms, the 1st prize was awarded to Mr. Robinson, Pimlico, for Beauty of Sussex, Eximia, Optimus, Standard of Perfection, Essex Triumph, Antagonist, Mrs. Shelley, Lady St. Maur, Dr. Graham, Cleopatra, Bathonia, Beauty of Sussex; 2nd prize, Mr. Hilder, of Eaton; 3rd prize, Mr. Hyde; 4th prize, Mr. Proctor, jun.; 5th prize, Mr. Jewell, Foot's Cray. For six fancy Dahlias, *Amateurs' Class*, 1st prize, J. Edwards, Esq., for Adolph Dubras, Hermione, Adonis, Vicomte des Ressiqueur, Roi des Pointillés, Queen of the French; 2nd prize, Mr. Ford, Maidenhead, for Surprise, Adolph Dubras, Vicomte des Ressiqueur, Bouquet de Bruell, Roi des Pointillés, and Mimosa; 3rd prize, Mr. Shepherd, Hornsey-road. In the *Nurserymen's Class*, twenty-four dissimilar varieties; 1st prize, Messrs. Cutter and Co., for Lady of the Lake, Victory of Sussex, Raphael, Beeswing, Lillywhite, Yellow Standard, Nonpareil, Marquis of Aylesbury, Beauty of Sussex, Essex Rosy Lilac, Springfield Rival, Sarah, Princess Radziwill, Essex Triumph, Mrs. Shelley, Beauty of Hants, Admiral Stopford, Louis Philippe, Captain Warner, Empress of Whites, Lady Stopford, Andromache, Captivation, and Standard of Perfection; 2nd prize, Mr. Turner, Chalvey, for Beauty of Hants, Turner's Louis Philippe, Rose d'Amour, Madame Rianzes, Marquis of Aylesbury, Turner's Berryer, Raphael, Beeswing, Cloth of Gold, Turner's Miss Vyse, Nonpareil, Indispensable, Fulwood Scarlet, Minn, Princess Radziwill, Beauty of Sussex, Queen, Turner's Scarlet Gem, Lillywhite, Essex Triumph, Admiral Stopford, Mrs. Anderson, Miss Sarah, and Cassandra; 3rd prize, Mr. Bragg; 4th prize, Mr. Barnes; 5th prize, Mr. Gaines.

FANCY DAHLIAS, twelve dissimilar varieties; 1st prize to Mr. C. Turner, of Chalvey, for Adolph Dubras, Roi des Pointillés, Coquette, Prisseus Koearde, Pemsl, Mimosa, Baron Hugel, Vicomte de Ressiquier, M. Wallner, Master G. Clayton, Hermione, Pantaloon. Mr. Harrison, of Richmond, received a prize for Adolph Dubras, Stein von Elstherstal, Roi des Pointillés, Venus, Ober Justisrath von Westerhoof, Mimosa, Vicomte des Ressiquier, Minerva, Admirable, Captivation, Surprise, and Narcissus. Mr. Bragg received an equal prize. An extra prize, a silver cup, presented by subscription, was awarded to Mr. Cook, Notting-hill, for twelve dissimilar blooms, consisting of Miss Vyse, Scarlet Gem, Cassandra, Caractacus, Widnall's Queen, Standard of Perfection, Optimus, Dr. Graham, Louis Philippe, Lady of the Lake, Madeline, and Bermondsey Bee. An extra prize, presented by Mr. C. Turner, of Chalvey, for six blooms of Dahlias sent out in 1847, was awarded to Mr. Howard, for Minn, Delicata, Miss Vyse, Marquis of Worcester, Louis Philippe, and Yellow Standard. *Seedlings of* 1846: first-class certificates were awarded to the following flowers,—to Mr. Collinson, of Bath, for a variety named Shylock, deep bright scarlet, good centre, and good show flower, something between Nonpareil and Scarlet Gem; a useful show flower, which would be more desirable if it differed more from the flowers above mentioned: to Mr. Gaines, of Battersea, for Mont Blanc, a full-sized white: to Mr. Keynes, of Salisbury, for Dodd's Walter Hilston, novel in colour, being a bright orange-buff; this flower is much cupped, but the centre is rather low, and sometimes confused; it is a desirable flower, and the best of its class when in perfection: to Mr. Barnes, Danecroft Nurseries, for Boule de Feu, a first-rate flower, fine in form, round, with the centre well up; in colour it is of a peculiar orange-red: to the same, for a fancy variety named Jenny Lind, a flower of good form, white and light maroon stripes, very distinct. An extra prize, silver cup, presented by Mr. J. G. Waite, of High Holborn, was awarded to Mr. Oakley for Gem, pure white, distinctly margined with rosy-lilac; very round, deep, and well formed; petals good and well arranged; eye a little low, yet compact centre; a very desirable flower, the best of its class; the marginal colour was somewhat irregular in the blooms at this exhibition, but we saw it earlier in the season when it was perfect in every petal, An extra prize, presented by Mr. Bragg, was awarded to Mr. Elphintone, for the best Fancy Dahlia not out, named Mrs. Shaw Lefevre, a flower of good form, well up in the centre, colour red and white. An extra prize was also presented by subscription, and awarded to Mr. Pope, of Chelsea, for the third best Dahlia of 1846, a large primrose-coloured flower named Nell Gwynne, but the centre is low. We noticed also, from Mr. Barnes, a neat well-formed dark maroon, of fine shape and medium size, named Samuel Girling; and a fancy flower, white and dull scarlet, named Remembrancer, both good flowers in their respective classes. *Seedlings of* 1847: a first-class certificate was awarded to Mr. Turville for a seedling named Fire King, novel and striking in colour, being a bright scarlet-orange; large, fine in form, good petal, and fine outline; centre rather low: to Mr. Rudd, for a white flower named Jenny Lind, a neat bloom, of good properties, which promises to be a desirable flower of its class; and a well-formed flower, of a dull scarlet colour, named Sir Robert Peel, from Mr. Collinson, of Bath.

TO PROPAGATE THE RHODODENDRON FROM SEED.

BY A NURSERYMAN.

FEBRUARY is the season that the seed of this beautiful plant is ripe, and it should be gathered on a dry day, and spread on paper, laid in a warm place or before a fire until the capsules open, which will be in the course of eight or ten hours, when the seed may be easily shaken out. In March, choose a piece of ground in a sheltered situation and shaded from the midday sun. Prepare a piece of ground by digging and breaking it very fine, then lay six inches of fine sifted turf mould all over. Sow the seed thick on the surface, and cover it with dried moss finely chopped and rubbed small. Then give a hearty watering with a fine rose, in order to wash the seeds into their mould. The use of the moss is to protect the young plants, and should not be removed. The plants will be ready to plant in nursery rows the third year after sowing, and should be planted in the same sort of mould as directed for the seed.

ON PROPAGATING THE DOUBLE WHITE MOSS ROSE.

BY J. R.

THIS beautiful Rose is somewhat difficult to cultivate successfully, and not readily increased. I served my apprenticeship as a gardener, &c., with Mr. Henderson, the celebrated and clever gardener at Wood Hall, Lanarkshire, in Scotland, and under his management this Rose was cultivated most admirably.

The part of the garden occupied by the White Moss Rose, and some other choice plants, at Wood Hall, was low and sheltered, the soil consisting almost wholly of rotted bark, or tan, formerly used in the hot-houses and melon frames. This substance is not congenial to the growth of plants so long as it contains any of the tannin or matter which renders bark useful to tanners; but being decomposed, and reduced to a black mould, is superior to every other for these plants. In this they were planted, and having established themselves a year or two, his method was to layer them—not in the usual way, by bending down the branches, and inserting a part in the soil—but he bent down every branch, and covered them with about an inch and a half of the mould. Had he left a single shoot uncovered, his opinion was that the tendency of the sap being to flow upward, too much of it would find a passage in that direction; but when all the branches were covered each received a like impulse; and his theory was borne out by the fact that every eye pushed forth a vigorous shoot which took root below the surface; so that more plants were produced from a given number of stools in a single season than could be produced in ten years by the old or common method.

The produce of the Tree Peony, too, by similar treatment, was truly astonishing. A single shoot, which was raised for the purpose of proving the excellence of the method, had twenty-seven rooted plants attached to it; nor have I the least doubt that many of my friends in the nursery line, profiting by these hints, will raise these plants in such quantity as to enable all who take an interest in fine plants to possess themselves of ones so very desirable.

REMARKS ON THE ARTIFICIAL LAKES IN THE PLEASURE GARDENS OF THE CHINESE.

BY A FOUR YEARS' RESIDENT IN CHINA.

I HAVE been pleased to observe remarks in late Numbers of this Magazine upon the flowers and gardens of China; and as nothing has appeared of a very interesting feature in their gardening ornaments, I send some particulars of the artificial lakes they construct with admirable effect.

Some of these are very small, sufficient only to contain one or two weeping willows, birch, larch, laburnum, or some other pendant plants, whose branches hang over the water; but others are large, highly cultivated, and enriched with lawns, shrubberies, thickets, and buildings: or they are rugged, mountainous, and surrounded with rocks and shoals being covered with fern, high grass, and some straggling large trees, planted in the valleys; amongst which are often seen stalking along the elephant, the tin hyung or man-bear, the rhinoceros, the dromedary, the ostrich, and the sin-sin or black giant baboon.

There are other islands, raised to a considerable height, by a succession of terraces, communicating with each other by various flights of magnificent steps. At the angles of all these terraces, as well as upon the sides of the steps, are placed many brazen tripods, that smoke with incense; and upon the uppermost platform is generally erected a lofty tower for astronomical observations; an elegant temple, filled with idols, the colossal statue of a god, or some other considerable work: serving, at the same time, as an ornament to the garden, and as an object to the whole country.

They also introduce in their lakes large artificial rocks, built of a particular fine coloured stone, found on the sea-coast of China, and designed with much taste. These are pierced with many openings, through which you discover distant prospects: they have in them caverns for the reception of tortoises, crocodiles, enormous water-serpents, and other monsters; with cages for rare aquatic birds; and grottos, divided into many shining apartments, adorned with marine productions, and gems of various sorts. They plant upon these rocks all kinds of grass, creepers, and shrubs, which thrive in such situations, as moss, ground-ivy, fern, stone-crop, common house-leek, and various other sorts of the sedum, crane's-bill, dwarf box, rock roses, and broom; with some trees rooted into the crevices; and they place on their summits, hermitages and idol temples, to which you ascend, by many rugged, winding steps, cut in the rock.

But far the most extraordinary, as well as the most pleasing of their aquatic constructions, are the Hoei-ta, or submerged habitations, consisting of many galleries, cabinets, and spacious halls, built entirely under water; their walls are decorated with beautiful shells, corals, and sea-plants of all sorts, formed into many singular shapes, and sunk into various irregular recesses; [in which are placed, in due order, Fung-shang, God of the Winds; Bonghoy, Monarch of the Sea; Shu-Kong, King of the Waters; with all the inferior powers of the deep. The pavements are laid in compartments of jasper, agate, and madrepores of Hay-nang, of the many extraordinary kinds: the ceilings are entirely of glass, which admits the light through the medium of the water, that rises several feet above the summits of these structures; the glass is of various bright colours, very strong; and the different pieces, artfully joined, to resist the pressure of the fluid with which they are loaded. The use of these habitations is the same as that of Miao-ting, before described: they are resorted to, in very hot weather, to feast and enjoy; and it is singularly entertaining, in the intervals of pleasure, to observe, through the crystal ceilings, the agitation of the waters, the passage of vessels, and sports of the fowl and fishes, that swim over the spectators' heads.

On the borders of their lakes are seen extensive porticoes, and many detached buildings, of different forms and dimensions, accompanied with plantations, sea-ports with fleets of vessels lying before them, forts with flags flying, and batteries of cannon: also thickets of flowering shrubs, meadows covered with cattle, corn lands, cotton and sugar plantations, orchards of various fruit trees, and rice grounds, which project into the lakes; leaving, in the midst of them, passages for boats; and in some places the borders consist of lofty woods, with creeks or rivers for the admission of vessels, whose banks are covered with high grass, reeds, and wild-spreading trees, forming close gloomy arbours, under which the vessels pass. From these arbours are cut many vistas through the woods, to distant prospects of towns, bridges, temples, and various other objects, which successively strike the eye, and fill the mind with expectation; when suddenly a farther progress is rendered impracticable by rocks, strong branches, and whole trees lying across the channel, between which the river is still seen to continue, with many islands; whereon, and also in the water, appear the remains of ancient structures, monumental inscriptions, and fragments of sculpture; which serve to give an edge to curiosity, and to render the disappointment more affecting.

Sometimes, too, instead of being intercepted in your passage, the vessel, together with the whole river, are, by the impetuosity and particular direction of the current, hurried into dark caverns, overhung with woods; whence, after having been furiously impelled for some time, you are again discharged into daylight, upon lakes encompassed with high hanging woods, rich prospects on mountains, and stately temples, dedicated to Tien-ho and the celestial spirits.

Upon their lakes the Chinese frequently exhibit sea-fights, processions, and ship-races; also fire-works and illuminations; in the two last of which they are more splendid and more expert than the Europeans. On some occasions, too, not only the lakes and rivers, but all the pavilions, and every part of their gardens, are illuminated by an incredible number of beautiful lanterns, of a thousand different shapes, intermixed with lampions, torches, fire-pots, and sky-rockets; than which a more magnificent sight cannot be seen. Even the Girandola, and illumination of St. Peter's of the Vatican, though far the most splendid exhibitions of that sort in Europe, are trifles, when compared to these of China.

At the Feast of Lanterns, in particular, all China is illuminated during three days: it seems as if the whole empire were on fire; every person lights up a number of painted lanterns, of various beautiful forms; sometimes of horn, glass, or mother-of-pearl, but most commonly framed of wood, carved, varnished, and gilt, upon which is strained thin silk, painted with flowers, birds, and human figures, that receive an uncommon brilliancy from the number of lights within: some there are likewise made like our magic lanterns, representing, by coloured shadows, ships sailing, armies marching, horses galloping, and birds flying: others are full of puppets, representing mountebanks, buffoons, boxers, wrestlers, and dancers, which are moved by imperceptible threads, the actions being accompanied by the voice of the operator, modified in different manners; all so conformable to the size and gestures of the figures, that they seem really to speak.

There are likewise lanterns made in the form of tigers, dromedaries, and dragons, of an enormous size, which are painted in transparency, and filled with lights; these are moved about the streets by men concealed within them, who artfully give to the machine every motion of the animal it represents; others there are seen floating upon the lakes and rivers, built like boats and vessels of various kinds, or shaped like dolphins, alligators and porpuses, that swim and curvet upon the water; others, again, that resemble birds fluttering amongst trees, or perched on the summits of the houses, on all parts of their temples, triumphal arches, and public structures of different kinds: in short, there is scarcely any form that can be imagined, which is not given to some of these lanterns, all executed with the greatest taste and neatness, often at a very considerable expense, some even to the amount of a thousand tael, or near three hundred and fifty pounds.

It is likewise upon this festival that the most splendid of their fireworks are exhibited; it would be tedious to describe them particularly, as they resemble, in many things, our European ones; but what is related on that head, by one of the missionaries, is curious, and may here be inserted, to give the reader an idea of Chinese skill, in works of this sort.

"I was extremely surprised," says the father, "at a fire-work which I saw at Peking, representing an arbour of vines; it burnt for a considerable time, without consuming; the grapes were red, the leaves green, and the colour of the stem and branches variegated, in imitation of nature; all the forms were represented with the utmost precision, in fires of different colours; the whole was executed with amazing art, and had the most pleasing effect imaginable."

Their rivers are seldom straight, but winding, and broken into many irregular points; sometimes they are narrow, noisy, and rapid; at other times deep, broad, and slow. Their banks are variegated, in imitation of nature; being in some places bare and gravelly, in others, covered with woods quite to the water's edge; now flat and adorned with flowers and shrubs, then steep, rocky, and forming deep winding caverns, where pigeons of the wood and water-fowl build their nests.

OBSERVATIONS ON PLANTING SHRUBS, &c.

BY A THIRTY YEARS' NURSERY PRACTITIONER.

THE proper season for planting shrubs has often been a subject of inquiry, and having, as the foreman of a large shrub nursery establishment, had thirty years' experience, I am enabled to furnish a portion of information that may be useful to some of the readers of the FLORICULTURAL CABINET.

Deciduous shrubs and trees are those which shed their leaves in autumn; and as soon as the foliage begins to fall, which is usually by the middle of October, this class of plants may not only be safely planted, but it is the very best period to perform it in. Such as are then planted strike root immediately, and being thus established at the following spring season, they push shoots at once, and the first year become objects of satisfactory display. The next best months are November, February, and March. When planted in December, January, and April, they do not succeed near so well.

The evergreens, in general, if taken up with due care, may be successfully planted at any period of the year, excepting June and July, but even those months also, if with balls of soil, attention to sprinkling over-head with water every evening, shading, &c. There are, however, particular seasons when they succeed far the best.

If the situation be dry, and the soil light and sandy, they should be planted (with the exception of Hollies) in October and November, if the weather be mild; on the other hand, if the situation be low and the soil retentive of moisture, they should be planted early in May. In both cases it is indispensable that all large trees and shrubs be removed with good balls, and that the roots be not injured. Hollies should always be removed from the end of May to the end of June.

In planting evergreens, whether it be done in a dull day, a wet day, or a dry day, it is necessary to keep in view the expediency of keeping the plants for as short a time out of the ground as possible—if only a few minutes, so much the better; and in all cases, when it can be done, when great numbers are to be planted, we should, if possible, have some men stationed to take up the plants, others to carry them, and a third set to put them in the ground.

In all seasons, situations, and soils, the plants should be well soaked with water as soon as the earth is put about the roots. Where the water is not at hand, so that it may be easily carried or wheeled by men, a horse with a water-barrel on wheels should be used. As soon as the plant has been put into its place, the earth should be filled in, leaving a sufficient hollow round the stem, and as far as the roots extend, to hold water, which should then be poured in in sufficient quantity to soak the ground down to the lowest part of the roots; in short, the whole should be made like a kind of puddle.

By this practice, which is particularly necessary in spring and autumn planting, the earth is carried down by the water, and every crevice among the roots is filled. Care must always be taken to have as much earth above the roots of the plants as will prevent them from being exposed when the water has subsided. The best plan is to take an old birch broom, or anything similar, and laying it down near the root pour the water upon it; this breaks the fall of the water, and prevents the roots from being washed bare of such earth as may adhere to them; in this way time is saved, for the water may be poured out in full stream from a pail, a watering-pot, or even from a spout or pipe in the water-cart or barrel, when the situation is such that this can be brought up to the plant.

After the first watering has dried up, the earth should be levelled round the stem of the plant, and as far out as the water has been put on, but not trod. If the plants are large, a second watering is sometimes necessary; but in ordinary-sized plants one watering is quite sufficient; and after remaining twenty-four hours, more or less, according to the nature of the soil, the earth about the stem and over the roots should be trod as firm as possible, and, after treading, should be dressed with a rake.

The Situations in which the Plants will thrive.—With regard to the situation in which each shrub should be planted little can be said here; to form a correct judgment of this, a knowledge of the natural habitats of each is required; this knowledge may be easily obtained by referring to a botanical catalogue, and other works treating on the subject. Some shrubs love a dry and elevated situation, and will not thrive if crowded with others,—some are rather tender, and must have warm and sheltered places,—others are very hardy, and will thrive planted anywhere,—others, again, will not grow freely unless they are placed in low, damp ground,—and others do not flourish if much exposed to the rays of the sun.

The kind of Soil best suited for them.—With respect to soil, hardy shrubs may be divided into two kinds, viz., first, shrubs requiring common soil, and, second, those shrubs constituting the American garden. A rich light hazel loam undoubtedly suits the greater part of the first class of plants, although many of the stronger growing kinds will make fine bushes on almost any kind of soil. The American plants, as Kalmias, Rhododendrons, Andromedas, &c. &c., make the finest plants and the best show if they are planted in a soil composed for the most part of sandy peat; but, in the absence of this, a very good compost may be made for them of light hazelly loam, river sand, and vegetable or leaf mould, equal parts, or a little peat earth mixed with it. After having taken out the original soil from the proposed border to about a foot and a half deep, substitute the above mixture in its place.

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

DAHLIA seeds are best retained in the heads as grown, spread singly where they will not be liable to mould, and kept in a dry but not too hot a situation; being thus kept in the chaff, the small seeds will not shrivel, but be kept plump. The roots must be dried well before being put away, or will be liable to rot.

SHRUBS, ROSES, &c.—Now plant as early as possible; be careful to secure them, so that winds do not loosen the roots.

Herbaceous border plants may still be divided and replanted.

Straw or reed hurdles ought now to be prepared for covering frames, &c., in the depth of winter.

DUTCH BULBS.—Plant immediately. (See articles upon in former volumes.)

PANSIES.—In order to preserve plants securely through winter, some of each kind should be potted and be kept in a cool frame during winter. If there be not such convenience, but are retained in beds, then hoops and mats, thrown over in severe weather, must be used. If stock for next year is required, that provision should now be secured.

IN THE GREENHOUSE, &c.

All greenhouse plants should have a free supply of air admitted, except when it is frosty. The plants should not be watered in the evening, but in the early part of the day, so that the damps may be dried up before the house is closed, as they are, during the night, prejudicial to the plants. The soil in the pots should frequently be stirred at the surface, to prevent its forming a mossy or very compact state. The plants must not be watered overhead. Luculia gratissima is the finest ornament for the greenhouse and conservatory, now and through the winter.

The plants of the Cactus that have been kept in the open air during the summer may be brought to bloom successively by taking such as are desired to bloom immediately into the heat of a forcing pine-house. Other plants, to bloom afterwards, should be kept in a greenhouse, protected from the frost. Any shoots still growing, break off the end to check it.

Plants of the Calceolaria that have been grown in the open borders during the summer months, and now taken up and potted, should be kept in a cool frame, or cool part of the greenhouse, being careful not to give too much water; just sufficient to keep the soil moist will only be necessary. Offsets will be found rooted; take them off and pot them.

Dutch bulbs, &c., may be successfully planted this month. (See articles on best mode of the culture of each, in former numbers of the CABINET.) Many persons who take a delight in growing some showy Hyacinths or other bulbous plants, for adorning a room or window, &c., in winter or early in spring, have been frequently disappointed by the abortiveness of some and weakness of others. This principally arises from the inability of the plant to develop itself with a rapidity equal to the quantity of moisture it imbibes, on account of its upper surface being acted upon too immediately by the atmosphere, &c.; hence arises the necessity of covering the bulb. That such is a fact is evidenced by the admirable and certain success of nearly every bulb, especially Hyacinths, that is covered with about six inches of old spent bark. This or some similar light material should always be used. Even bulbs intended to bloom in glasses we prefer starting in the old bark, and then transferring them to the glasses when the shoots are about two inches long. Where such covering is not adopted, it is of advantage to have the pots or glasses kept in a dark place till the shoots are two or three inches long.

Plants of some of the Chrysanthemums that are grown in pots and taken into the greenhouse will be found to have pushed a number of suckers. If the offsets are wanted for the increase of the kind, it is advisable to pinch off the tops, so as to prevent their exhausting the plant, to the weakening of the flower. If the flower-buds are thinned out freely, it conduces to the increased size of those left. If the offsets are not wanted, it is best to pull up the suckers entire. Attention will be required to watering, as the roots absorb much, if given; give manure water occasionally. If the plant is allowed to wither, it checks the flowers, whether in bud or expanded. So much do we admire this handsome genus of flowers, that we are fully persuaded their beautiful blossoms, exhibited in form and colour, will most amply repay for any labour that may be bestowed on the plants.

SHRUBS, &c., FOR WINTER BLOOM.—Such as are to bloom early should be gradually prepared, potted immediately, if required, and by the middle of the month introduce such as are desired to bloom by Christmas into the house or pit. The kinds which are well deserving such attention are Roses, Honeysuckles, Jasmines, Azaleas, Kalmias, Persian Lilacs, Andromedas, Carnations, Pinks, of which Anne Boleyn is the best, Rhododendrons, Rhodora, Deutzias, Ribes, Spirea prunifolia, Mezereum, Gardenias, Cupheas, Heliotropes (the new blue is fine), Scarlet Pelargoniums, Cactus, Eranthemums, Justicias, Salvia, Gesnereas, Corræas, Chinese Primrose, Aconites, Mignonette, Primroses, Cinerarias, Stocks, Persian Iris, Crocus, Cyclamens, Sweet Violets, Hyacinths, Lily of the Valley, &c.

In the final arrangement of the stock of plants in winter quarters, guard against crowding it; drawn stock is not endured in these days; it is far better to throw a portion entirely away than to spoil superior specimens. Much of second-rate character, which requires another season's growth, may be preserved in good dry pits, at least until the middle of December, when, if very hard weather occurs, they may have a chance of removal, perhaps, to some of the other structures, until the end of January. It ought ever to be a maxim in regular plant-houses that no two plants touch; still we must confess that many who would admit the propriety of the principle are frequently compelled to practice otherwise, through want of sufficient accommodation.

The Camellias which had been forced into growth in February and March will shortly be ready to open their buds. Let them be liberally supplied with clear and weak liquid manure. We use soot-water and guano in a liquid state, the latter in very small quantities. Nothing can exceed the healthy appearance of the plants so treated. The application of liquid manures is frequently wrongly conducted. There is no such wholesale manuring in Nature as we see practised in an artificial way. The ammonia of the atmosphere is presented in very weak doses, but in a continuous way. May we not take Nature as a model?

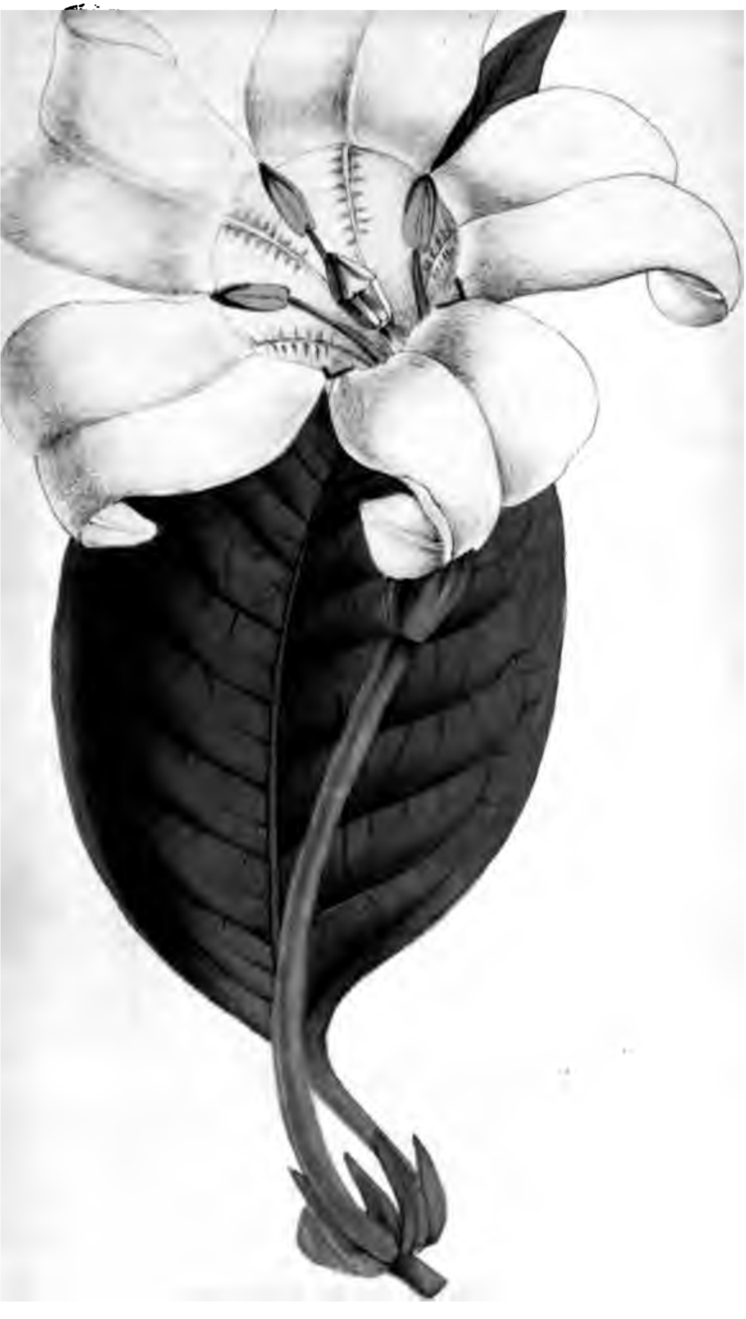
ON A LOVE OF FLOWERS.

BY FLORA.

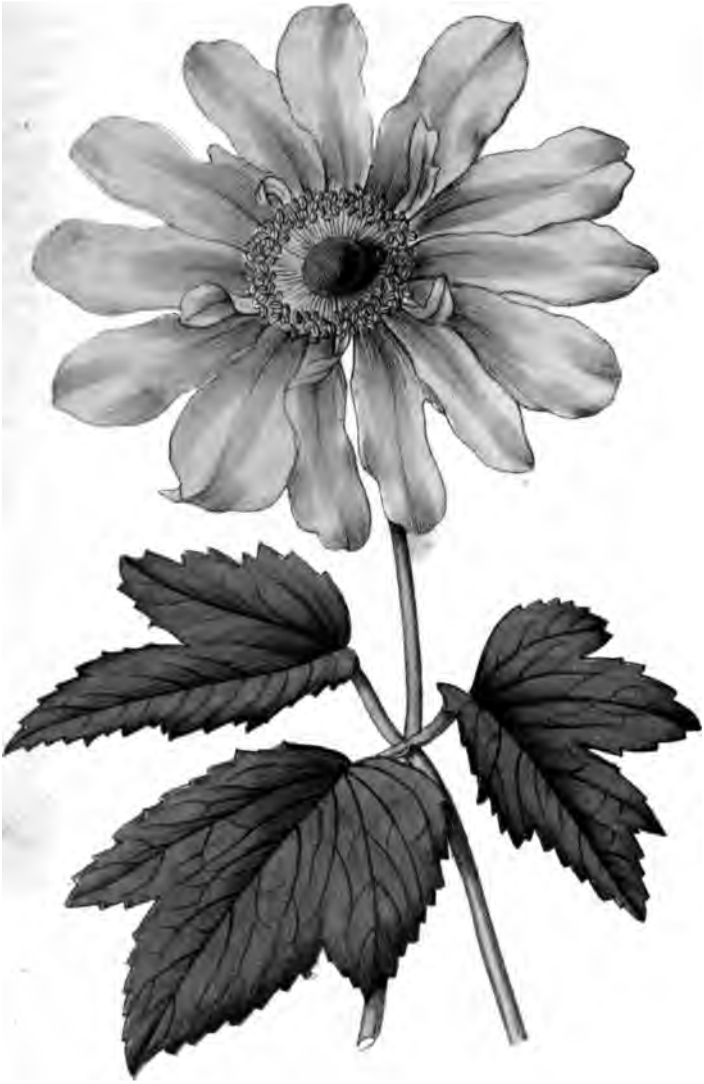
THE productions of the vegetable kingdom are among the first objects that forcibly attract the attention of young children, becoming to them the source of gratifications which are among the purest of which our nature is capable, and of which even the indistinct recollection imparts often a fleeting pleasure to the most cheerless moments of after-life.

Who does not look back with feelings which he would in vain attempt to describe to the delightful rambles which his native fields and meadows afforded to his earliest years? Who does not remember, or at least fancy that he remembers, the eager activity with which he was used to strip Nature's carpet of its embroidery, nor ceased to cull the scattered blossoms till his infant hands were incapable of retaining the accumulated heap? Who, on even seeing the first violet of returning spring, much more on inhaling its sweetness, or in catching the breeze that has passed over the blossom of the bean or of the woodbine, does not again enjoy the very delights of his early childhood?

It may be said that the pleasure of such recollections is, for the most part, of a moral and intellectual nature; but the pleasure of the original enjoyment appears to be principally of a physical character, and is, no doubt, intended to produce at the moment a highly beneficial, though merely physical effect; for while the eye of the child is attracted by the unexpected forms and colours of the plants and flowers presented to his view, and his mind is instigated to gratify the eager desire of possessing them, he necessarily subjects his limbs to that degree of exercise and fatigue which contributes to the general health of his body. Nor let such pleasures be undervalued in their consequence; they give that moderate stimulus to the whole system which even the early age of infancy requires; and by shutting out the listlessness that would arise from inactivity, they become eventually the source of moral and intellectual improvement.



Gardenia Devoniana.



Anemone japonica.

FLORICULTURAL CABINET

DECEMBER, 1847.

ILLUSTRATIONS.

ANEMONE JAPONICA.—JAPAN ANEMONE.

THIS new species of the beautiful tribe of Anemone is a valuable one, and we are indebted to the Horticultural Society for its introduction, along with many other handsome flowers, to this country, their collector in China having forwarded it from Shanghee, the Japanese part of China. Dr. Siebold states it inhabits damp woods on the edges of rivulets, on a mountain called Kifune, near the city of Mako, in Japan. It is a perennial plant, grows freely, and blooms profusely when properly cultivated. It flourishes in the open border during the summer; the flower stems rise from half a yard to two feet high, and when grown in masses is handsome in such situations. We find it to be more valuable grown in pots in the greenhouse, especially so as an autumn and winter-blooming plant; it then forms an object of much beauty, and is very showy. It may be procured at a cheap price, and, being very easy of culture, deserves to be in every collection.

NOTES ON NEW OR RARE PLANTS.

AQUILEGIA LEPTOCERAS—SLENDER-HORNED COLUMBINE.

Ranunculaceæ. Polyandria Trigynia.

"A dwarf herbaceous plant, not growing more than nine inches high, with slender purplish green stems, thinly coated with scattered hairs. The leaflets of the triternate leaves are wedge-shaped, rounded, with about three lobes at the end. Each stem bears one or two flowers, on slender pedicels rather more than two inches long. The flowers are a pale bright violet, with the tips of the sepals greenish, and of the short petals a clear bright straw colour. It is a native of Siberia, beyond the lake Baical, according to Messrs. Fischer and Meyer. It is found to be a hardy perennial, growing best in a mixture of light sandy loam and a little leaf mould. It is increased freely by seed sown as soon as ripe. It must be considered a neat and very pretty plant,' well suited for rockwork.''—*Jour. Hort. Soc.* (Figured in *Bot. Reg.*, 64.)

BLETIA GEBINA—JAPANESE BLETIA.

Orchidaceæ. Gynandria Monandria.

A delicate looking terrestrial Orchid, bearing a near connexion to *B. hyacinthina*; it is thus described in the Horticultural Society's Journal:—" leaves broad, plaited, rising up the stem, from six to eight inches long, or more, and two inches wide, the uppermost acuminate, the lowest obtuse. The flowers are about as large as *Bletia hyacinthina*, from six to eight in a spike, two inches and a half in diameter, nearly white, with a faint tinge of blush. The lip is a pale delicate violet, obtusely three-lobed, with seven plates upon its surface, of which two at the side are confined to the middle lobe, and the five others are extended to the base, which is a little stained with yellow." We saw it in bloom at Messrs. Loddiges' nursery, Hackney, in the spring, and were informed the plant is sufficiently hardy to be grown in the cold frame or greenhouse.

BROWALLIA JAMESONI—JAMESON'S BROWALLIA.

Scrophulariaceæ.

This very distinct and handsome shrubby plant was produced in bloom last summer by Messrs. Veitch, at one of the meetings of the Horticultural Society. It grows from two to four feet and upwards in height, and is clothed with soft pubescence. It is furnished with small rough ovate shining leaves, and sub-corymbose cymes of somewhat crowded deep yellow and orange-coloured blossoms, which have a long slender tube, and a roundish, somewhat crimped, expanding limb of an inch or more in diameter. The species is a native of New Granada, Ecuador, and Peru. It appears to have been introduced about 1846.

CROWEA LATIFOLIA—BROAD-LEAVED CROWEA.

Rutaceæ. Decandria Monogynia.

This delightful greenhouse shrub was introduced to this country from New Holland upwards of twenty years ago, but it has hitherto been much neglected. It grows more robust, and forms a finer object than even the well known *C. saligna*, and like it blooms freely nearly all the year. The flowers are about an inch across, and of a pretty rosy pink colour. It may be had in some of the London nurseries. (Figured in *Bot. Mag.*)

DENDROBIUM CRETACEUM—CHALK-WHITE DENDROBE.

Orchidaceæ. Gynandria Monandria.

From their collectors of Moulmein plants, Messrs. J. Veitch and Son, of Exeter, received this distinct species, which bloomed in their nursery in July last. It has a very peculiar appearance when in flower, by the dead chalky-whiteness of its blossoms. It appears also to possess a particular distinction in producing its flowers solitary, and not in pairs or threes. The flowers are two inches across, the lip is neatly pencilled with crimson, and densely covered all over with a short white fur. (Figured in *Bot. Reg.*, 62.)

DIPLADENIA NOBILIS—NOBLE DIPLADENE.

Apocynaceæ. Pentandria Monogynia.

This is a worthy addition to the species already in our gardens, of this fine tribe of climbing stove plants. It is a native of South America, and was received from a Belgian nursery by Mr. Glendenning, of Chiswick, in whose establishment it has recently bloomed. The plant possesses a large woody dark-coloured tuber, from which the shoots proceed; and after having attained a length of three or four feet, produce flowers in terminal one-sided racemes of six or more blooms, which are a beautiful white, slightly tinged at the edges with pink. The throat is a deep carmine colour, gradually shaded off down the centre of each lobe. The base of the tube is a bright wax yellow colour. Each flower is two inches long, and spreads out to about two inches in diameter. The foliage is of a bright glossy green, with numerous prominent curved veins. Another kind is named by M. Morreu, in the "Annales de la Societé de Gand," with flowers entirely crimson, larger and more expanded, the lobes of the corolla more acuminate, a wider orifice, and the base of the tube still more contracted. Both kinds are very distinct, and highly deserve to be grown.

ERIA CONVALLARIOIDES—LARGE CLOSE-HEADED WOOLWORT.

Orchidaceæ. Gynandria Monandria.

This variety is distinguished from the original kind by its larger size, and by the flowers being much more globose and nearly closed; it may therefore be considered as an improvement. The flowers are of a pure ivory white, and are produced in oblong heads of about two inches in length. (Figured in *Bot. Reg.*, 63.)

EUCALYPTUS MACROCARPA—LARGE-FRUITED GUM TREE.

Myrtaceæ. Icosandria Monogynia.

Found by Mr. Drummond in the Swan River colony, where it forms a considerable portion of a large forest, surrounding an immense open sandy desert called Guangan. Plants were raised from seeds in 1842, in the Royal Gardens at Kew, and having reached near six feet high during the past summer, they produced bloom. The flowers are about two inches across, and of a bright red colour, which, as the entire genus is apetalous, belongs to the stamens alone. The plant has a remarkable appearance by the light colour of its foliage, which is entirely covered everywhere by a glaucous white powder. (Figured in *Bot. Mag.*, 4333.)

HOLLBOLLIA ACUMINATA—TAPER-LEAVED HOLLBOLLIA.

Lardizabalaceæ.

This is an evergreen twining plant, with the habit of H. latifolia, from which it differs in having very taper-pointed, not blunt, leaflets, and racemes whose stalks are much shorter than those of the leaves, and in its purplish flowers not half so large as in H. latifolia, but, like that plant, deliciously fragrant, resembling the perfume of the orange. It is a neat greenhouse plant, raised from Nepal seeds, presented to the Horticultural Society by the Hon. East India Company, about 1845 (?). The flowers are produced in the spring. (Figured in *Journ. Hort. Soc.*, 2, 313.)

IRIS AUREA—GOLDEN IRIS.

Iridaceæ. Triandria Monogynia.

Messrs. Whitley and Osborne, of the Fulham nurseries, raised this showy hardy perennial from Indian seeds given to them by Dr. Royle. The flowers are of a deep yellow colour, and of the size of I. ochroleuca; it much resembles that kind too in habit. (Figured in *Bot. Reg.*, 59.)

NAVARETTIA SQUARROSA—SQUARROSE NAVARETTIA.

Polemoniaceæ.

A rather pretty hardy annual plant, flowering in August and September, and having considerable general resemblance to Triptilion spinosum, but the flowers are less intensely coloured. The plant is covered with hairs, which secrete a viscid matter, and emit a most unpleasant foxy odour. The habit is erect branching; the leaves cut up into many sharp spiny segments; the flowers blue, in close spiny heads among the bracts and calyx lobes. It is a native of New California, and was introduced by Mr. Hartweg, who sent seeds to the Horticultural Society in 1847. It is also called G. squarrosa, Hoitzia squarrosa, Ægochloa pungens, Gilia pungens. (Figured in *Journ. Hort. Soc.*, 2, 316.)

RHODODENDRON JAVANICUM—JAVANESE RHODODENDRON.

Ericaceæ. Decandria Mouogynia.

This is a very splendid plant, having a strong robust habit, with somewhat broad leaves, of a bright glossy green, and producing large heads of finely formed flowers of a showy orange-yellow colour, marked with several red spots. It is in the possession of Messrs. Veitch, who received it, with another and deeper coloured variety, from Mr. Lobb, their collector. It inhabits high mountains in Java, and was found by Dr. Horsefield, at an elevation of 4000 feet above the level of the sea. It may therefore be grown in the greenhouse, and where, no doubt, it will prove one of the most ornamental objects ever introduced. (Figured in *Bot. Mag.*, 4336.)

TRITONIA AUREA—GOLDEN TRITONIA.

Iridaceæ. Triandria Monogynia.

Introduced from Caffraria by Mr. James Backhouse, of York, and is by far the most beautiful of all the genus. The stem rises about two feet high, and is crowned with a large panicle of bright orange-coloured Ixia-like flowers, each of which is two and a half inches or more across. Being easy of cultivation, a profuse and long bloomer, it will be a great acquisition to the flower garden, and it is highly deserving of being generally grown. It was exhibited at the Horticultural Society's rooms in September last.

TROPÆOLUM UMBELLATUM—UMBELLATE INDIAN CRESS.

Tropæolaceæ. Octandria Monogynia.

A remarkably distinct and handsome species, having its flowers disposed in umbels of five or six or more in each. It was originally discovered by Professor Jameson, of Quito, growing on the Pilzhum mountain, at an elevation of 7000 feet above the level of the sea. Messrs. Veitch received it from their collector, and flowered it during the last summer in their nursery. It is likely to prove one of the most hardy of the genus; and being a very profuse bloomer, it is certain to become highly appreciated. The flowers are each rather more than an inch in length, of a rich orange-red colour, tipped with yellow and green. The foliage, borne on long flexuose footstalks, is of a bright light green, about three inches across, and deeply five-lobed. It is a very novel and beautiful acquisition. (Figured in *Bot. Mag.*, 4337.)

THE ROSE.

FROM the first day of November to the middle of December is the best period in which to plant the Rose—the earlier the better. Each season we are favoured with valuable additions to this lovely tribe of flowers, and in the lists sent us this autumn we notice many such described. We took notes of most, from our own stock as well as those of others, a list of which we insert.

The catalogues of Messrs. Rivers, Francis, Paul, and Lane, contain valuable collections, and useful notes on the cultivation of various sections.

In Mr. Rivers' we observe the following judicious particulars, which we extract.

"Standard Climbing Roses are the most beautiful objects the Rose-garden can show; they form, in the course of two or three seasons, large umbrageous heads, drooping in the blooming season with abundance; they should never be pruned, but left entirely to Nature. Owing to the luxuriance of their growth, they seem to take off all the sap the stem of the Dog-rose can furnish, consequently, rarely is a sucker, those pests to the Rosarium, seen. The stems of some Standard Crimson Boursaults, four years old, now growing here, are eight inches in girth, and their heads spread over a space of ten feet in diameter; they continue to flower all the summer, owing, as I am inclined to think, to the vigour they derive from the stock, for on their own roots they seldom bloom but once in the season.

"I may, perhaps, venture to give the results of some experiments made these three last seasons with Roses. I have found night-soil, mixed with the drainings of the dunghill, or even with common ditch or pond water, so as to make a thick liquid, the best possible manure for Roses, poured on the surface of the soil twice in winter, from one to two gallons to each tree. December and January are the best months. The soil need not be stirred till spring, and then merely loosened two or three inches deep with the prongs of a fork; for poor soils, and on lawns, previously removing the turf, this will be found most efficacious. For protecting the Bourbon, Chinese, Tea-scented, and other Roses, on their own roots, nothing can be better than moss procured from shady banks or woods. It should be placed round each plant, one or two inches from the stem and branches, not closer, about nine inches or a foot thick. This prevents the ground from being frozen; and, although the tops of the shoots may be killed, they grow vigorously from the root on the return of mild weather. This covering may be applied early in December, and remain around the plants till the end of March, or even later, if a cold backward spring.

"All the Tea-scented and other Roses on short stems, for potting, should have their roots closely pruned. If potted before the close of November, they will bear gentle forcing the first season; after potting, they should be placed on a gentle hotbed, the pots plunged two inches above their rims in sawdust or old tan; they should remain there till the beginning of January; if the frost is very severe, their heads may be protected with hay or litter. When removed to the forcing-house, their heads should be cut in to within three or four buds. Placing the plants in bottom-heat makes them put forth young roots, so that they will bear gentle forcing nearly as well as if established one year in pots. For gentle forcing, the house should have fire-heat during the day only, unless frosty, and in February and March a free admission of air; in sunny weather, syringe the plants in the morning at nine o'clock.

"As Roses are now annually exported to a large extent, I feel that I ought to mention the most eligible modes of packing, the result of considerable experience. For the East and West Indies, and all distant warm climates, the only safe method is to plant them in a Ward's case, in a small quantity of mould, with moss carefully fastened to its surface, so as to prevent any disturbance. For North America and all parts of the continent of Europe, they may be sent with perfect safety from November till February, the root of each plant closely enveloped in dry moss, and packed in a strong close case. Roses from pots should be taken out of their pots, and the ball of earth closely packed in dry moss. The early autumnal months are the most favourable for exporting all descriptions of Roses grown in pots."

Speaking of China Roses, Mr. Rivers gives the following excellent advice:—"For beds for the flower garden, on their own roots, these Roses ought to be cultivated in preference to many annuals, they are so constantly in flower during the summer and autumn, and give so little trouble. China Roses form beautiful low standards for a group; to insure their succeeding perfectly, these should be taken up about the end of November, and placed against a north wall, their roots placed in the ground with their heads resting against the wall, over which a mat should be nailed in severe weather. They may be planted out towards the end of March, and they will bloom in great perfection during the summer and autumn. The same treatment is recommended for Standard, Tea-scented, and other tender Roses."

Mr. Francis' catalogue contains the following observations:—

"In cultivating Roses, nothing delights in rich soil more than this handsome flower. They should always be planted in a composition of stiff loam, rotten dung, or leaf-mould. Where Roses have grown strong after three or four years' standing, they may be taken up, the ground well renewed, the roots pruned, as well as their shoots very much thinned, and then planted in the same situation; they will then produce as fine blooms as when first transplanted from the nursery. This should always be done in the early part of November. Roses bloom well the first year after being transplanted, if carefully attended to. They should, when transplanted, have a strong stake attached to each standard, to preserve them from the wind moving them, and then well mulched round. If dry weather the ensuing spring and summer, they should be occasionally watered with liquid manure.

"In pruning Roses, much requires to be observed. With the exception of Teas and Chinas, December and January are considered the best months for pruning; many sorts, such as the Hybrid China, Hybrid Bourbon, with some of the strongest growing Noisettes and Bourbons, require very little pruning; about every third year they should be pruned in close, so as to make them produce new wood, and to prevent the plants getting too old and ugly in appearance. The Persian Yellow requires merely to have just the top of the shoots taken off, it being found to flower only on the last year's wood. Another excellent plan for Standard Hybrid Chinas, many of the Pillar Roses, and Standard Climbers, is to prune them in pretty close just after they have done flowering. They will then produce new shoots the same summer, and flower abundantly the next season. February and March are considered the best months for pruning Teas and Chinas.

"In protecting Roses, the past severe winter has fully proved the necessity for protecting all the Tea kinds, with many of the Chinas, such as Sulphurea superba, Infidelites de Lisette, Alexina, &c. Very few young plants have survived, except where protected. Dry litter or short dung should be laid round the plant, while branches of fir or fern should be stuck round, to break the severity of the frost."

ROSA HARRISONII.

A MAGNIFICENT plant of the Rosa Harrisonii has brought to perfection at Coleshill House, Berks, the seat of the Earl of Radnor, upwards of 350 blooms. Mr. Cowie, the gardener, states, that, along with other Roses, it had been subjected to a gentle heat, and to all appearance the blooms were more perfect than when produced out of doors. The plant in question is a standard, about four feet in diameter, and forms a fine conservatory ornament at this season. It has been treated strictly in conformity to its habits; after it has done flowering, it is partially cut back and planted out of doors in rich soil, and is well supplied with liquid manure during the growing season; if required, it is again taken up in autumn for forcing, or allowed to bloom out of doors.

THE METROPOLITAN DAHLIA SOCIETY.

We have much pleasure in stating that a considerable number of nurserymen and amateur Dahlia growers, in conjunction with Mr. Glenny, are forming in London, upon a large scale, a Society bearing the above title. The meeting for the arrangements of the schedule of prizes will take place in January, on the day of the annual meeting of the horticulturists of Great Britain. About fifty members are already enrolled, the trade members subscribing five guineas annually, and the amateur members half a guinea. Several persons of distinction have become patrons, and it is certain that, the object being single and popular, the greatest harmony will prevail. A proof of this has fully appeared in the Dahlia exhibitions which we have visited the past season, where the greatest cordiality and delightful interest prevailed.

In recent copies of the *Edinburgh Weekly Journal*, we observe some articles from Mr. Glenny, who conducts the horticultural department of that newspaper, relative to the necessity of forming such a Society, and its advantages to the floral public. Adverting to the late dissolution of the Metropolitan Society of Florists, it is stated:—

"There was a time when the Metropolitan Society of Florists comprised the flower of the nursery business and the best of the amateur cultivators; but twelve or fifteen leading men, who were, in 1832, the ornament of the science, have departed this life, and broken so many links of a chain that could not be repaired. The Society encouraged the cultivation of florists' flowers, not of one kind, but of all kinds. When there were as many Pink, Pansey, and Tulip growers as there were of Dahlia cultivators—when the Rose, Geranium, and Ranunculus had their share of admirers—when the Carnation and Picotee were supported with as much zeal as any other subject, then there was no difficulty, because there was no jealousy; but of late years the Dahlia growers have so far preponderated that they were naturally sore at the expenditure among Panseys, Pinks, and Tulips, of funds that they considered to belong to the more popular flowers, and, seeing this, there was but one way to meet the exigency and save the science from degradation. The constitution of a society that was all it ought to be when floriculture was in the shade, ceased to be so when it had set the example to hundreds of other societies that sprung up all around it. Each flower now has its enthusiasts and its societies. No mixed objects can be entertained where the flowers find their own funds. The horticultural and botanical associations take no entrances, ask for no sacrifices, and as they invite people to compete for prizes, without charging them any entrance fee, there will always be plenty to show (as people would take lottery tickets as a gift), and wait with patience for the award of the judges (as the ticket holders would for the drawing of the blanks and prizes). The awards only stand for so much luck, good or ill, as the case may be. Nobody feels it any discredit to lose, or honour to win; but as a matter of profit, without the chance of a loss, the thing might go on for years, without any disparagement.

"When, however, a society is looked up to as an authority—when, in a general way, it is an honour to be a winner, and a slur to be far behind, there is abundant room for the exercise of that jealousy which any supposed wrong creates, and nothing is considered a greater wrong to the enthusiastic growers of one flower than to devote the funds of a society to another. The Metropolitan Society had arrived at this state two years ago. The Dahlia-growing members increased, the lovers of other flowers decreased, and the former felt annoyed when their subscriptions, or any part of them, were devoted to prizes for such other flowers. Besides, there was a supposition abroad that a society like that would, if in bad hands, be a powerful auxiliary to the unfair trader. It would have been made instrumental in forcing on the public bad things as good ones. Those who have seen the Metropolitan Society looked up to by everybody as a fine test for novelties, and respected its objects and its character, were anxious to see the last of it, instead of its becoming in other hands the means of defrauding the public. It was right that the president and secretary, and the respectable members of the committee who meant to retire, should see the formal dissolution of the Society before they deserted their posts; and, strange as it may appear, out of the good materials will be formed several societies for the encouragement of so many different flowers; and as all the jealousy and grounds of dissatisfaction will be avoided, there is little doubt that there will be more members to each than there ever was to the whole of the Metropolitan Society as it stood. The recent formation of the Royal Metropolitan Dahlia Society was the work of scarcely an hour, and already there is more subscribed than there used to be for the whole of the flowers. The meetings will not be so frequent; the rules will be well defined; the proceedings will be under the direction of those who supply the means of being liberal, and we do not fear the result; the entrance fees of showers will be less than heretofore; but there will be one class interesting to the smallest cultivators, even those who only grow a dozen plants. A class for the best six new flowers, let out by subscribers only, will be thrown entirely open, at a nominal entrance of one shilling, to all members and non-members who enter for that class before the first Tuesday in September. This class will have certainly not less than two prizes, but the plan of giving two-thirds of the stands prizes will be adhered to, however many there be. Here, then, is a field open to the whole country, even to people who have only a sod of ground, and can barely grow a dozen of the new flowers. The prizes in this class will be 50*s.*, 45*s.*, 40*s.*, 35*s.*, 30*s.*, 25*s.*, 20*s.*, 15*s.*, 10*s.*, 5*s.*, and the rest, up to two-thirds of the class, 2*s.* 6*d.* each. The establishment of this class, of which we have well considered the effect, will induce hundreds of young beginners to commence with the new flowers instead of old ones; and if they who have new flowers to let out act wisely, they will add their names to the list of five-guinea subscribers. The amateurs will find that, by confining the subscriptions to this one flower, the entrances will be lower than usual. The entrance, however, of non-members will be in all cases three times as much in each class, so that it is as well that those who usually exhibit enrol their names at once, or at least signify their intention so to do. The list of all the new flowers let out by the subscribers will be constantly kept before the amateur, that he may see how many varieties are eligible to be shown in this class. This alone should induce any person interested in a new flower to enter his name as a member, and thus reap the advantage of publicity in the prospectuses of the Society. Thus has arisen, phœnix-like, from the ashes of the old Society, an institution that will do more for the Dahlia than the rest of the societies put together, and, more particularly, if the liberality of those in the trade who rarely come forward enable the Society to increase the encouragement by appropriately liberal prizes."

FLORAL EXHIBITIONS.

HORTICULTURAL SOCIETY.

October 5.—Among subjects of exhibition was a fine collection of Orchids from the nursery of Messrs. Loddiges, of Hackney, comprising, among other things, Cattleya bicolor, a scarce species, with deep violet lip and tawny-green petals; C. granulosa; Angræcum pertusum, Odontoglossum grande, the latter particularly well coloured; and, by way of contrast, two specimens of Cymbidium giganteum, one flowered in a hothouse, the other in a cool well-aired greenhouse. The latter was richly coloured, while the former was comparatively colourless, a fact which conclusively proves the beneficial effects arising from cool and airy treatment, more especially when the plants are coming into blossom. From the same collection were also two fine plants of Platycerium grande, a noble-looking Fern, and one of the very easiest to cultivate; and a small plant of Anopterus glandulosus, a new evergreen greenhouse plant, from New Holland. A Knightian medal was awarded for these, and a similar award was also made to Mr. Catleugh, of Chelsea, for magnificent plants of Aphelandra cristata, and the larger variety of Justicia carnea, than which it would perhaps be difficult to find better examples of good cultivation. The Aphelandra was dwarf and bushy, each branch surmounted with brilliant comb-like flowers; the Justicia was about three feet in height and four feet through, bushy to the very pot, and loaded with blossoms. Along with these was also a Heliotropium, known in the nurseries by the name of Voltairianum, a fine deep purple variety, raised on the Continent, and much handsomer than the common Heliotrope. A certificate was awarded it. A fine specimen of the Chinese Renanthera coccinea was communicated by Mr. Woodham Death, Nettleswell, Harlow; it was stated that this was the third time the same plant had bloomed within these twenty-three months; it had been kept in a cool house, fully exposed to the sun. A Banksian medal was awarded it. Of novelties, Messrs. Veitch and Son, of Exeter, contributed a new Vanda, which had been sent by Mr. T. Lobb from Java, under the false name of insignis; it approaches V. Roxburghii in appearance, but is distinct from that as well as from all others at present in cultivation. A Banksian medal was awarded it. The same nurseryman also received a certificate for a plant sent from Peru by Mr. W. Lobb as a Nolana, but which appeared to be a Petunia, or a plant nearly allied to

Petunia. The flowers are delicate pink, becoming deeper in the centre; the foliage larger and very different from that of the Petunia, and also quite free from smell. From Mr. Glendinning, of the Chiswick Nursery, was a new tuberous-rooted Dipladenia called nobilis, with delicate pink flowers, which assume a deeper hue in the throat; though, perhaps, not so handsome as D. crassinoda, it is nevertheless a very beautiful species, very different from any at present in cultivation. A Banksian medal was awarded it. Messrs. Jackson, of Kingston, contributed a little lilac-flowered Primula from Nepal, and some Achimenes, which were, however, much injured by travelling. Mr. Craggs, gardener to Sir T. Acland, Bart., M.P., sent from Killerton, Devonshire, a fine specimen of Miltonia Clowesii, which was, however, unfortunately, a little past its best. A Banksian medal was awarded it.

Of FLORISTS' FLOWERS, Messrs. Paul and Sons, of Cheshunt, exhibited boxes of autumnal Roses, of which the following are a few of the best:—*Perpetual*, La Reine, Baronne Prevost, Prince de Galles, Duchess of Sutherland, and Duc d'Aumale. *Noisette*, Ophirie. *Tea*, Safranot, Comte de Paris, Adam, Mirabile, Pactolus, Goubault, and Niphetos. *Bourbon*, Souchet, Dupetit Thouars, George Cuvier, Souvenir de la Malmaison, and Marianne.

METROPOLITAN SOCIETY OF FLORISTS.

THE Grand Dahlia Show of the above Society took place on Tuesday, the 28th of September, at the Crown and Anchor Tavern, Strand, when prizes were awarded as follows:—

To Amateurs for the best stand of twelve Varieties.—1st prize, to Mr. Howard, Burnham, for—Marquis of Worcester, Competitor, Miss Sarah, Essex Triumph, Nonpareil, Delicata, Marquis of Aylesbury, Yellow Standard, Louis Philippe, Marchioness of Cornwallis, Queen of Roses, and Miss Vyse; 2nd prize, to Mr. Ford, Maidenhead, for—Metropolitan, Essex Triumph, Andromeda, Springfield Rival, Beeswing, Princess Radzíville, Lady Leicester, Miss Vyse, Marchioness of Cornwallis, Aurantia, Berryer, and Nonpareil; 3rd prize, to Mr. Bird, for—Victory of Sussex, Essex Triumph, Marquis of Worcester, Miss Vyse, Nonpareil, Princess Radziville, Beeswing, Captain Warner, Star, Essex Rosy Lilac, Queen of Perpetuals, and Berryer.

To Amateurs for the best stand of twelve Varieties.—1st prize, to Mr. Proctor, Bermondsey, for—Mrs. Shelley, Gloria Mundi, Essex Triumph, Lady St. Maur, Berryer, Victorine, Lady of the Lake, Biondetta, Marchioness of Cornwallis, Scarlet Gem, Star, and Louis Philippe; 2nd prize, to Mr. Cooke, of Notting-hill, for—Lady St. Maur, Mrs. Shelley, Essex Triumph, Cleopatra, Beeswing, Miss Vyse, Nonpareil, Marquis of Worcester, Standard of Perfection, Dr. Graham, Scarlet Gem, and Louis Philippe; 3rd prize, to Mr. Robinson, Pimilco, for—Optimus, Mrs. Shelley, Antagonist, Caractacus, Queen, Beeswing, Beauty of Sussex, Marchioness of Cornwallis, Dr. Graham, Athlete, Admiral Stopford, and Prometheus.

To Amateurs for the best stand of six new Varieties.—1st prize, to

Mr. Proctor, for—Lady of the Lake, Victorine, Goldfinder, Louis Philippe, Marquis of Worcester, and Miss Vyse; 2nd prize, to Mr. Howard, for—Victorine, Miss Vyse, Venusta, Louis Philippe, Marquis of Worcester, and Delicata; 3rd prize, to Mr. Ford, for—Rosetta, Yellow Standard, Berryer, Fulwood Scarlet, Miss Vyse, and Captivation; 4th prize, to Mr. Taylor, of Bath; 5th prize, to Mr. Cook, of Notting-hill.

To Nurserymen, for the best stand of twenty-four Varieties.—1st prize, to Mr. Barnes, Stowmarket, for—Dowager Lady Cooper, Madame Zehler, Cleopatra, Beeswing, Nonpareil, Alexandrina, Marquis of Bath, Miss Sarah, Marquise de Peyreuse, Standard of Perfection, Essex Rosy Lilac, Raphael, Victorine, Caractacus, Griselda, Eboracum, Conspicuum, Rembrandt, Ophir, Mrs. Anderson, Queen of Roses, Minerva, Miss Vyse, and Berryer; 2nd prize, to Messrs. Bragg and Bright, of Slough, for—Beeswing, Goldfinder, Duchess of Richmond, Aurantia, Lady of the Lake, Sir E. Antrobus, Venusta, Mrs. Anderson, Athlete, Marchioness of Cornwallis, Essex Rosy Lilac, Princess Radziville, Marquis of Aylesbury, Lady St. Maur, Essex Triumph, Gloria Mundi, Empress of Whites, Marquis of Bath, Queen of Roses, Beauty of Bath, Nonpareil, Star, Lady Leicester, and Standard of Perfection; 3rd prize, to Mr. Drummond, of Bath, for Beeswing, Prometheus, Andromeda, Gloria Mundi, Box, Mrs. Shelley, Pandora, Marquis of Worcester, Marchioness of Cornwallis, Essex Triumph, Aurantia, Miss Vyse, Admiral Stopford, Captain Warner, Biondetta, Burnham Hero, Standard of Perfection, Nonpareil, Louis Philippe, Miss Sarah, Yellow Standard, Rose d'Amour, John O'Gaunt, and Rembrandt.

FANCY DAHLIAS. *To Amateurs for the best six Varieties.*—1st prize, to Mr. Ford, for—Coquette, Vicomte de Ressiquier, Alba, Purpurea Grandiflora, Madame Wachy, Adonis, and Roi des Pointelles; 2nd prize, to Mr. Shepherd, Hornsey Road, for—Queen of the French, Bouquet de Breuil, Madame Walner, Miss Watson, Adolphe Dubras, and Roi des Pointes; 3rd prize, to Mr. James, for—Adolphe Dubras, Madame Walner, Hermione, Captivation, Goldfinch, and Admirable.

. *To Nurserymen for the best twelve Varieties.*—1st prize, to Mr. Harrison, of Richmond, for—Captivation, Surprise, Mimosa, Vicomte de Ressiquier, Herherzog, Stephen, Minerva, Miss Watson, Hermione, Admirable, Desdemona, Roi des Pointes, and Adolphe Dubras; 2nd prize, to Mr. Barnes, for—Bouquet de Breuil, Coquette, Queen of the French, Madame Walner, Elegans, Mimosa, Purpurea Alba Superb, Adolphe Dubras, Minerva, Admirable, Herherzog, Stephen, and Hermione; 3rd prize, to Messrs. Bragg and Bright, for—Bouquet de Breuil, Queen of the French, Admirable, Delicata, Minerva, Miss Watson, Ober Justizrath, Von Werlhoff, Hermione, Madame Wachy, Adonis, Adolphe Dubras, and Roi des Pointes.

First-class certificates were awarded to the following seedlings:—To Mr. Barnes, of Stowmarket, for a seedling named Samuel Girling; a dark variety. To Mr. Turville, for a seedling named Charles Turner; a blush white, tipped with purple. To Mr. Gaines, Battersea, for a white seedling named Mont Blanc. To Mr. Collisson, of Bath, for Shylock; a scarlet variety. To Mr. Keynes, of Salisbury, for War Eagle; a heavy scarlet. To Messrs. Bragg and Bright, of Slough, for a seedling named Forest Flower; a deep lilac variety. To Mr. Drummond, of Bath, for a seedling named Mrs. Ashley; a deep lilac. To Mr. Barnes, of Stowmarket, for a *fancy* variety named Jenny Lind; crimson, tipped with white. To Mr. Harrison, of Richmond, for a *fancy* variety named Jenny Deans; a reddish crimson, edged with white. To Mr. G. Smith, Hornsey Road, for a seedling Verbena—Fairy. To Mr. Robinson for Defiance; a scarlet variety. To Mr. Barker, for St. Margaret; a very good variety, colour a reddish scarlet, with ruby centre: also a certificate for a seedling named Lady of the Lake; a large light rose.

PROPAGATION OF GLOXINIAS.

These may be raised either from seeds or by cuttings of the young shoots, or by leaves. The seeds should be sown in shallow pans of sandy soil, on a thin bed of silver sand, a little of which should afterwards be dusted over them. Place the pan in a brisk hotbed, and cover it with a bell glass until the seeds vegetate. The cuttings should be taken off when the young shoots are about three inches long; plant them in silver sand, and set them in a hotbed. Leaf propagation may be done in two ways:—1. Insert a leaf in sand, like a cutting, the base soon forms a knob, from which a bud is subsequently developed. 2. Cut the principal rib at the back of the leaf through with a knife, in several places, an inch or more part; then press the leaf flat upon the sand, and place a few small stones on the top, near the incisions, to keep it down flat; the ribs are to be placed downwards; then cover with a bell glass, and place in a brisk heat; little knobs will be formed at the incisions, which, in due time, will put forth buds. Keep them all, while growing, in a warm moist atmosphere, and when their leaves are mature allow them to become comparatively dry, in which state they may be set away in a cool frame for a month or two; after which they should be potted in fresh soil, of equal parts sandy peat and leaf-mould, set in a warm pit, and gradually watered until they are fairly started, when they must have plenty of heat, light, and water, and a little weak liquid manure once or twice a week.

NATURE'S HINTS TO FLORISTS.

How singular but unerring a lesson is given us in the constant struggle of Nature to resume her sway! When man has been permitted to lead her out of her usual course, whether it be in the crossing of the races of animals, or the hybridizing or high cultivation of flowers and plants, the animal and vegetable kingdom alike yield to the constant attention and skill of man, and alike revert to their own original character the instant man relaxes in his care. Does it not seem a beautiful object of contemplation that man is rewarded for his skill and ingenuity in being sanctioned in his endeavours to improve the races of animals and vegetables? Here is a fact which speaks volumes. Nature scatters her beauties in abundance, but all things have individually only a small share; man is endeavouring to collect the shares of many subjects into one individual. Agriculturists obtain, by cross-breeding and high feeding, the good points of several animals in one; the gardener obtains in a single fruit the good qualities of several; the florist rests not until he has monopolised in a single flower the good qualities that have been divided among many. Take any popular subject for an illustration: to the Rhododendron family Nature has been bountiful, but her favours have not been lavished on one; to R. ponticum she has given the valuable quality of hardiness, but the flower is mean, the foliage poor; to arboreum she has given a brilliance of colour not to be surpassed. The florist has, by means of his art and science, so cross-bred these two kinds as to have obtained in one individual both the hardiness and the brilliant colour; and having attained this object, he is permitted to multiply the new branch of the family to any extent, and the subject is established in perpetuity. Plant out one of the individuals wherever it will grow, and it will not degenerate, as man calls it; it will not revert to its former ill-shaped, mean-looking flower and foliage, on the one hand, nor will it lose its hardiness, on the other. But man is permitted to go farther than this; by a different mode of culture he is allowed to increase the vigour of a plant, and, by seeding from it in the state of excitement, to produce a disposition to sport; to select from the progeny such as deviate from the natural habit, and, according to his finite notions, are improved in form, texture, or colour, and by bits from the plant itself to multiply the same thing to any extent; but as this is no longer concentrating the individual beauties which Nature had already supplied, but creating out of her abundant powers new ones contrary to the original properties of the plant, the instant man relaxes his watchfulness, and withholds that management which has produced the change, he loses the character which he has established. But we have yet one feature in this change that rarely enters the mind of the thoughtless. The change is wrought; the individual variety is multiplied, and passes into the hands of the idle, as well as the industrious; the former puts his pet plant into the ground, and leaves it there, uncared for, unattended; the latter continues the care which produced the change. The idle one sees Nature claiming her wandering subject, and the flower go back as near as may be to the original simple form; the industrious florist preserves his in all its beauty and integrity. To bring this home by example: the Pansy has been changed from its native deformity—if it be not impious to call anything in nature deformed—to a bold, circular, velvety, rich flower; continue propagating by cuttings and rich feeding, and it remains true; plant it out on poor, natural soil, and leave it untouched, and it will go back to a form, and diminish to a size, that no florist would tolerate in his garden. Pinks, Carnations, and Picotees are in this particular the same; place them in natural ground, and leave them there, and you will see them diminish in size and doubleness, and get worse in form, until they become like wild ones, instead of garden varieties. Again, sow seed from any of these highly-bred flowers; Nature struggles so hard to regain her sway, that nine-tenths of the seedlings are more like the original flower than like the improved one.' The vigilance of the florist is obliged to step in; he destroys all that go back a single step, and retains only those which maintain their improvement. Let him save seed from the whole collection, bad and good, and his relaxation this one season is fatal. They will nearly all be degenerated, as we thoughtlessly call it, meaning, however, they will have gone back to their original state. It would seem as if it were designed for an important lesson. Assiduity, skill, and perseverance, are rewarded by the accomplishment of great objects. After they have been accomplished for the benefit of all who desire to enjoy them, they are preserved to the careful and lost to the idle man. Nobody can look with indifference on these things; they may be idle, careless, vicious, and not look at all; but if they do look, they must see in them the language of a monitor. No matter to what flower we turn, wherever there has been attained the greatest alteration from Nature, there will be found the necessity of exercising the greatest vigilance. The finest Pansy, Pink, Carnation, Picotee, Tulip, Auricula, Ranunculus, Polyanthus, anything greatly improved by culture, may be placed side by side, and left a season or two, and nobody would know them again; and, supposing there were none but them to show what had been done, it would take many years to recover the loss and retrograde movement of two neglected seasons.—*Horticultural Magazine.*

REMARKS ON THE TULIP.

BY MR. JOHN SLATER, FLORIST, CHEETHAM HILL, MANCHESTER.

WHAT measures shall I take with my Tulips? This is an important question with Tulip growers, and I have no doubt that it has often suggested itself to the amateur during the present disastrous season. The oldest grower does not remember one so unfavourable, and we have some growers in our neighbourhood fifty years old; many collections are reduced to one-half, and how to manage the remaining portion is the subject of this article. There are but a few who have been fortunate, although I am one of the number, having had only twelve roots which died down in the best beds, containing 199 rows; my greatest loss has been in seedlings. The subject has occupied my attention daily, lest disaster should fall to my lot next season; and, after much consideration, I am convinced that the greater the change of soil the better would be the chance of success. Since last April I have been busy preparing for next planting season. Some will say, how is this to be done? I am not in a neighbourhood where soil may be obtained. Money in most instances will, however, purchase it, and what is 20*s*. or 40*s*. to secure your roots? The plan I propose to put into execution is as follows:—being so fortunate as to have five different qualities of rotten grassy turf, I intend to put under them three inches deep of soil such as I have never used before for growing Tulips, to mix the other four together to cover with, and the soil at the top I shall put at least two feet deep; this, I am convinced, is the only way of preventing any consequences which are likely to arise from this season. Where this cannot be effected, however, the only way is to change the soil entirely, and to substitute fresh from another part of the garden; I have seen three inches of the top soil of an onion bed, as well as soil from the potato ground, used with good effect, the ground having been enriched by manure. But I should not advise soil from the potato ground to be used, as there is a disease in some Tulips similar to that affecting the potato crop. All soil ought to be well exposed to the sun and air, and should be very frequently turned over; the greatest losses have arisen in collections where soil of the previous year has been employed, thus showing the necessity of changing it every year. I am now, however, giving advice that I do not strictly follow; I am only enabled to change the soil of three beds eighteen yards long; the other three are upwards of four feet deep, and I remove the earth from three to four feet in length, and the width of the bed, trenching it and bringing fresh soil to the top. If the bed is intended for breeders, I manure it, and turn it over twice or three times, and sow it over with turnips; but if for broken varieties, I keep turning it over until planting time. This plan I have followed some years.

ON WILD ROSE STOCKS FOR BUDDING UPON TO FORM STANDARD ROSES.

BY AN EXTENSIVE PROPAGATOR.

CONSIDERABLE attention is now paid to the cultivation of the Rose, particularly as standards, in order to form that very ornamental appendage to the lawn and shrubbery; and though I am not a nurseryman, I annually propagate a great number. My efforts have been very successful, and I am therefore induced to send the particulars of my procedure. For the forthcoming number I now transmit my mode of treatment relative to providing stocks for budding upon, it being the season to procure them, &c.

Selection of Stocks.—Any time from the end of October to the middle of February, plants of the wild English Rose are procured. I find, however, that the earlier the better. There are several varieties of stocks to be had: those I prefer being far the best, and of a very upright growth, making shoots nearly half an inch in diameter, and growing several feet high in one season. The colour of such is either wholly green barked, or green slightly tinged with brown. The ripe fruit of both is of a long oval shape. These kinds are generally to be met with in plantations or woods, and occasionally in hedges. There is a spreading, bushy-growing kind, which has a red bark, and a small roundish fruit; this I find does not answer near so well as the others, the buds not taking so freely, nor, if they take to uniting at all, do they grow so kindly afterwards.

In getting up the wild stocks, I have always given strict orders to my gardener to get them up with as much length of root as convenience would admit. This attention is necessary in order to get some fibrous roots; and, after all, it will often occur that not a single fibrous root will be found upon the main roots. They are, however, very free to grow under either circumstance; only the former ones afford the advantage of making more and stronger lateral shoots the first season, and also better-placed shoots for budding upon.

Stocks of different sizes and heights are procured, in order to suit a vigorous, or less so, growing kind, to be inserted by budding, and to have some worked from two to five feet high. Care is taken to get such stocks as are free from large knots, some such being found upon the stocks when of several years' growth. It certainly adds to the beauty of the tree, to have a straight free-growing stock.

Having got up the stocks on a day that is not frosty, I have them brought as soon as convenient, that the tender roots may not be damaged by exposure to a cool air.

In planting them I select a good soil about a foot deep, and have a portion of well-rotted dung dug into it. The strongest growing kinds of stocks I plant in one piece of ground, and the less so in another. This is easily ascertained by observing what strength the lateral shoots have previously grown before removal. The necessity of this selection is requisite, because if a very vigorous growing kind were inserted into a small stock, the bud would take all the support, and grow to a single shoot, or form a poor head.

Before planting I have the stocks dressed, cutting *clean* away all lateral shoots to the height at which I wish the stock to be kept, and cutting off the head about a quarter of an inch above a bud, in a sloping direction from the bud. Any damaged roots are finished with clean cuts, either by a knife or fine-toothed saw. The top cut of the stock I always cover over with a mixture of bees' wax and pitch, to keep out wet.

The stocks are planted in rows at from two to three feet apart, arranging the tallest in the back row, and the lower ones in the front proportionably. A trench being made, the roots are regularly disposed, and covered from four to six inches deep, treading the soil gently upon the roots, and close up to the stem, to fasten it properly. I then have a stake fixed so as to tie it to its place, and prevent its being shaken with the wind. I have observed in some nurseries a long stick, fixed horizontally at the height of three feet, and to which the stocks were tied; but this does not answer so well as each having a separate stake to keep it in an upright position, the wind driving those secured in the cross-bar manner in a falling direction.

Nothing more is required till the stocks push shoots in March, or early in April.

NEW CHRYSANTHEMUMS.

Both in-doors and out, the flowers of this delightful tribe have been, and still are, displaying their gaiety and loveliness in great variety and distinctive beauty, rendering them the brightest of Flora's ornaments at this season of the year. Within a few years, very surprising additions have been raised by seed, both in this country and by our floral friends in France and Belgium. Several of the newest and best we have in bloom, and we can assure our readers they are valuable acquisitions, and ought to be in every collection. The following are some of these:—

KING OF THE CRIMSONS (Salter's).—A very rich dark crimson, flower large, petals broad, very double, and remarkably showy. A most desirable variety.

TEMPLE OF SOLOMON (Salter's).—A large double magnificent golden-yellow flower. A most valuable addition to its class.

ENGLAND'S QUEEN (Freestone's).—A most magnificent flower, large, very double, deep; petals broad, and a rich deep lilac. Ought to be in every collection.

FLEUR DE MARIA (Salter's).—Pure white Anemone-formed flower, with a middle-sized centre of the short florets, similar to a German Aster. Very neat and beautiful; well deserving to be in every collection.

PONIATOWSKI (Salter's).—Crimson-red, large double, petals broad, free bloomer. A superb variety, and very ornamental.

VULCAN (Salter's).—A rich deep crimson, very double, petals broad. A superb close-formed flower, and a profuse bloomer. Ought to be grown in every collection.

COMTE DE RANTZAU (Salter's).—Chestnut-crimson, large, good-formed flower; very showy and highly ornamental.

ENDYMION.—Very good form, and a fine rosy-pink flower; a very distinct and useful variety.

NANCY DE SERMET.—A handsome Anemone-flowered variety, large, outer flat petals pure white; the German Aster-like, tube-shaped inner ones, white, tipped with yellow. It is a very singular and distinct sort.

GENERAL ROCHAMBEAU.—Deep rosy-red, large, fine broad petals, and superb shape. A handsome addition.

HECUBA.—Cinnamon, tinged with yellow; large, very double, fine petals; blooms profusely in clusters. A very showy and handsome variety.

RIGOLETTE.—Nankeen and yellow, with a brown tinge; large, very double, and superb form. It blooms profusely, and is very ornamental.

SPHYNX.—A rosy-crimson, middle size, very double, petals broad; superb shape. Blooms very profusely in clusters; highly ornamental.

PLUTON.—A dark cinnamon-brown, very double, petals broad, superb shape, and very showy. A valuable acquisition.

STRIATUM.—We remarked upon this very pretty variety in our last year's particulars of New Chrysanthemums, but as some of our present readers might not have seen them, we just say here that it is a great novelty, white striped with crimson-purple; flowers of the Ranunculus shape, very double and perfect, blooming freely. Ought to be in every collection.

ZOE.—Beautiful rosy-lilac, large, petals broad, double. A valuable variety, deserving to be in any collection.

MADAME POGGI.—Crimson-claret, large, petals broad, very double, and superb form. It is a profuse bloomer, and very showy.

DECRIQUE.—A rich bright purple, middle size, fine petals, very double, and superb shape. A profuse bloomer, very ornamental, and ought to be in every collection.

Remarkable (Freestone's).—A very striking Anemone-flowered variety, five inches across; the outer petals deep crimson, the inner ones same colour, but are very beautifully tipped with gold. It merits a place in every collection; blooming profusely renders it particularly ornamental.

Annie (Salter's).—This variety has been out for three years, but it is so very neat, and of the yellows is the best-formed flower we have seen, that we recommend it to those who want one of its class. Flower middle size, very double, petals broad, fine shaped. Blooms profusely, and is a valuable acquisition.

Queen Victoria (Freestone's).—In our last year's descriptions we noticed this very beautiful variety, but its merits are such as to deserve it to be recommended again. It is a most distinct colour from any other we have seen, a clear bright lilac, broad petals, very double, superb form, and a profuse bloomer. It ought to be grown in every collection.

Emilie Labois.—Flower good size, petals broad, incurving, very double, and superb form; rose colour, with whitish margins, and the under-side of petals exhibit white tips. It is a free bloomer, very neat and handsome. Ought to be in every collection.

Isabelle (Salter's).—A dark golden-yellow, large, petals broad, double, good form. Very showy.

Reine Bacchanal.—Crimson-red, with a tinge and tip of yellow; good form, double. Very showy and ornamental.

Prince of Wales (Freestone's).—Deep golden-yellow edged, and tipped with red; fine broad petals, large, double. A very superb variety, well deserving cultivation in every collection.

Norfolk Champion.—Beautiful blush, shaded with deep lilac-purple; petals very broad, incurved, large double flower, and a most superb variety. It ought to be in every collection, however select.

Nonpareil.—Beautiful crimson-violet, with a light-coloured centre; petals broad, very double, compact, and superb form. It is a very handsome variety, deserving to be in every collection.

Duchesse D'Aumale.—Blush and white; petals broad, very double, and an excellent flower. Distinct and handsome.

Nini Pompon.—A very pretty rose, with white tips. Very good form, and handsome.

(*To be continued.*)

HYBRID PERPETUAL ROSES WHICH BLOOM TO THE END OF NOVEMBER.

In answer to the inquiry of "A Lady" for a list of a few of the best Perpetual Roses, the following are highly recommended; the First Section for training against walls, trellises, or posts, to the height of six or eight feet; the Second Section as standards of any size. They are suited to grow for exhibitions.

First Section.

Baronne Prevost, blush, large, and most beautiful.
Comtesse Duchatel, rosy-blush, free bloomer, beautiful.
Cornet, beautiful bright pink, large and sweet.
Duchess of Sutherland, glossy-blush, very beautiful.
Duc d'Isly, crimson and lake, brilliant and semi-double.
Earl Talbot, very deep rose-pink, large and fine.
Glorie de Rosamène, bright crimson, strong grower, good.
Lilacea, blush, large and good.
Louis Bonaparte, bright rose, fine.
Madame Damène, bright rose.
Madame Laffay, crimson, good.
Marquise d'Ailsa, crimson, large and fine.
Mrs. Elliott, crimson, large and beautiful.
Queen, brilliant rose, very large and beautiful.
William Jesse, crimson, tinged with lilac, very fine.

Second Section.

Aubernon, pale crimson, superb.
Baronne Prevost, blush, large, and most beautiful.
Comtesse Duchatel, rosy-blush, free bloomer, beautiful.
Duchess of Sutherland, glossy-blush, very beautiful.
Eugene Sue, shaded crimson, compact, very neat and beautiful.
Glorie de Rosamène, bright crimson, strong grower, good.
La Rénoncule, lively crimson, beautiful.
Lady Alice Peel, rosy-crimson, perfect and good.
Marquise Boccella, pale pink, beautiful.
Marquise d'Ailsa, crimson, large and fine.
Mrs. Elliott, crimson, large and beautiful.
Queen, brilliant rose, very large and beautiful.
William Jesse, crimson, tinged with lilac, very fine.

INFLUENCE OF LIGHT ON PLANTS.

At the recent meeting of the British Association, Mr. Hunt, who is so well known for his researches on light, read a report "On the influence of Light on the growth of Plants." The author confirms the conclusion, that seeds will not germinate under the influence of light separated from the chemical principle with which it is associated in the sunbeam; that germination being effected and the first leaves formed, light—the luminous rays—become essential to the plant to enable it to secrete the carbon obtained from the carbonic acid of the atmosphere; and that the increased action of the heat rays are essential to insure the production of the reproductive elements of vegetable life. It is found that the chemical principle of the solar rays is more active, relative to heat and light, during the spring than at any other period of the year: that as summer advances this power diminishes, and luminous force increases, whilst with the autumn both light and actinism are subdued, but the calorific radiation increased. Thus we find the conditions of the light of the seasons varying to suit the necessities of vegetable life. The production of chlorophyl, or the colouring matter of the leaves, was shown to be due to the joint action of light and actinism—the first being necessary to effect the secretion of the carbon, and the latter for the oxidation of this deposited carbon.

FORCING VIOLETS.

BY E. H.

In the latter end of September, or beginning of October, I generally commence forming my violets. Being marked out for a one-light box, I commence placing a layer of wood on the surface of the ground, and so continue to the height of three feet; then put on a layer of strawy litter on the top of the wood, so as to prevent the soil falling through; on the top of this I place a layer of turf all over the bed, after which the frame is put on, and filled to about eighteen inches of the glass, with good rich mould. When the mould is settled in a day or so, take the plants up with ball of earth attached to them, and plant them in the frame, putting a little dry earth between the plants, and giving them a good soaking of warm water; the frame is closed up for a day or two, until they have taken fresh roots. After the plants are established in the frame, put a lining of stable-dung all round the frame; the heat of the dung affords a bottom-heat to the violets, and by replacing the lining when required, a degree of heat sufficiently to force the violet to a very high degree of perfection, can always be maintained. I have had hundreds of violets in a one-light box, by following this method.

THE NOBLE CONSERVATORY IN THE ROYAL GARDENS OF KEW.

This magnificent building will soon be covered in, and the nearer it comes to completion the more majestic and astonishing it appears, When finished it will far exceed everything of the kind in Europe. and very probably everywhere else. It is built from the design of D. Burton, Esq. It consists of a centre and two wings. The length of the house is 362 feet; the centre portion is 100 feet wide and 66 feet in height; the wings are 50 feet wide and 30 feet high. The whole is of iron, stone, brick, and green-coloured sheet glass. There is an iron gallery all round the interior of the centre part, at 30 feet from the floor. The house will be heated by hot-water pipes and tanks, distributed above and beneath the floor. The smoke will be conveyed by an under-ground flue, within a brick tunnel 6 feet high, to a distance of 160 yards from the house, to a shaft or ornamental tower 60 feet high. There will be 45,000 feet of glass, and it was constructed in the house as to curve, so that it will throw off without sustaining injury, any object of moderate weight that may lay upon it.

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

THE beds which are not filled with bulbs, or such as will admit of a pot being sunk between roots of the herbaceous flowers, should now be made as lively as possible, and this is readily done, and at a trifling cost, by plunging in potted plants of Lauristinus, Aucuba, myrtle-leaved, broad-leaved, and variegated Box, Hollies—gold and silver-striped, edged, &c., also the entire green-leaved, the yellow-berried, and dwarf-fruited crimson, &c., Arbutus, Rhododendron, Mahonia aquifolia, Phillyrea, Arbor vitæ, Bay, Kalmia latifolia, dwarf Laurels, Daphne pontica, cedars, &c. A garden thus furnished produces a very cheering appearance, and those who have not seen one so ornamented cannot adequately conceive of its beauty and finished neatness. This attention most amply repays for the small expense, producing a lively appearance, instead of having bare beds for several months. If any Tulip bulbs be still out of ground, plant them as early as possible.

IN THE FORCING STOVE.

Roses, Honeysuckles, Jasmines, Persian Lilacs, Azaleas, Rhododendrons, Carnations, Pinks, Primroses, Mignonette, Stocks, Aconites, Persian Irises, Crocuses, Cyclamens, Rhodoras, Cinerarias, Hyacinths, Ribeses, Sweet Violets, Heliotropes, Narcissus, Tulips, Lilies of the Valley, Correas, Deutzias, Mezereums, Hepaticas, Gardenias, Cupheas, New Blue Heliotropes, Scarlet Pelargoniums, Salvias, Chinese Primroses, &c., required to bloom from January, should be brought in early in the present month. The plants should be placed at first in the coolest part of the house; never allow them to want water. Pots or boxes containing bulbous-rooted flowering plants, as Hyacinths, Narcissus, Persian Irises, Crocuses, &c., should occasionally be introduced, so as to have a succession of bloom. Many persons who take a delight in growing some showy Hyacinths or other bulbous plants, for adorning a room or window, &c., in winter or early in spring, have been frequently disappointed by the abortiveness of some and weakness of others. This principally arises from the inability of the plant to develop itself with a rapidity equal to the quantity of moisture it imbibes, on account of its upper surface being acted upon too immediately by the atmosphere, &c.; hence arises the necessity of covering the bulb. That such is a fact is evidenced by the admirable and certain success of nearly every bulb, especially Hyacinths, that is covered with about six inches of old spent bark. This or some similar light material should always be used. Even bulbs intended to bloom in glasses we prefer starting in the old bark, and then transferring them to the glasses when the shoots are about two inches long. Where such covering is not adopted, it is of advantage to have the pots or glasses kept in a dark place till the shoots are two or three inches long. Cactus plants that have been kept out of doors, or in the greenhouse, should occasionally be brought into the stove for flowering, which gives a succession. If any of the forced plants be attacked with the green fly, a syringe with diluted tobacco-water will destroy them. If the leaves appear bit, and turn brown (the effect of damage by red spider), a syringe of soap-suds at the under side of the leaves is effectual to destroy them. The glutinous substance remaining, not only kills those it is applied to, but prevents others returning there. The old Eranthemum pulchellum, with its fine blue flowers, Justicia speciosa, Gesneriæ zebrina, Justicia pulcherrima, and Appellandria cristata, are fine winter ornamental blooming plants.

IN THE GREENHOUSE, &c.

As much fire as will barely keep out frost will be necessary, and for the purpose of drying up damp arising from foggy nights, or from watering. All possible air should be admitted in the day-time, but mind to keep the plants from damage by frost. The plants must not be watered overhead. Some of the Chrysanthemums that are grown in pots and taken into the greenhouse will be found to have pushed a number of suckers. If the offsets are wanted for the increase of the kind, it is advisable to pinch off the tops, so as to prevent their exhausting the plant to the weakening of the flower. If the flower-buds are thinned out freely, it conduces to the increased size of those left. If the offsets are not wanted, it is best to pull up the suckers entire. Attention will be required to watering, as the roots absorb much if given: give manure-water occasionally. If the plant is allowed to wither, it checks the flowers, whether in bud or expanded. So much do we admire this handsome genus of flowers, that we are fully persuaded their beautiful blossoms, exhibited in form and colour, will most amply repay for any labour that may be bestowed on the plants. If seed be desired, retain the blooming stems on the plants, and keep them for some time in an airy warm situation to perfect.

Dahlia seed is best retained in the heads as grown, spread singly where they will not be liable to mould, and kept in a dry but not too hot a situation; being thus kept in the chaff, the small seeds will not shrivel, but be kept plump. The roots must be dried well before being put away, or will be liable to rot.

Fuchsias and greenhouse plants, intended to be inured to the open air, will require to have protection at the roots, and probably, for the first winter, over the tops too, by furze branches, canvas, wicker baskets, &c.

If greenhouse plants require watering or syringing over the tops, let it be done on the morning of a clear day, when air can be admitted; and towards evening a gentle fire-heat should be given.

Be careful to protect beds of what are technically called "florists' flowers," should severe weather occur. Calceolarias that were cut down and re-potted last month will require attention, not to water too much, or they will damp off. Keep them in a cool and airy part of the greenhouse or pit. Whilst in a cool and moist atmosphere, the shoots will often push at the under-side numerous rootlets. Where such are produced, the roots should be taken off and potted; they make fine plants for next season, and are more easily propagated now than at any other season. Protect the stems of tender climbing Roses, and other kinds, by tying a covering of furze over them, that, whilst it fully protects, admits sufficiency of air for the well-being of the plant.

Auriculas and Polyanthuses will require plenty of air in fine weather, and but little water. The like attention will be required to Carnations, Pinks, &c., kept in pots. Dahlia roots should be looked over, to see if any are moulding or likely to damage. Let the roots be dry before they are laid in heaps. Newly-planted shrubs should be secured, so that they are not loosened by the wind. The pots of Carnations and Picotees should be placed in a situation where they may have a free air, and be raised above the ground. If they are under a glass case, it will be much better than when exposed to the wet and severity of the winter, or many will, in all probability, be destroyed. Where it is desirable to leave patches of border flowers undistributed, reduce them to a suitable size by cutting them round with a sharp spade. When it is wished to have a vigorous specimen, it is requisite to leave a portion thus undisturbed. Ten Weeks Stocks and Mignonette, in pots for blooming early next spring, to adorn a room or greenhouse, must not be over-watered, and be kept free from frost. A cool frame, well secured by soil or ashes at the sides, and plenty of mats or reeds to cover at night, will answer well. Tender evergreens, newly planted, would be benefited by a little mulch of any kind being laid over the roots. During hard frosts, if additional soil be required for flower-beds upon grass lawns, advantage should be taken to have it conveyed at the time, so that the turf may not be injured by wheeling. Pits or beds for forcing Roses, &c., should be prepared early in the month. Tan or leaves are most suitable, unless there be the advantage of hot water or steam. New-planted shrubs of the tender kinds should have their roots protected, by laying some mulch, &c. Suckers of Roses, &c., should now be taken off, and re-planted for making bushes, or put in nursery rows; soils for compost should now be obtained. Beds of Hyacinths, Tulips, &c., should have occasional protection. Any roots not planted may successfully be done, in dry mild weather, till February.

PELARGONIUMS.—Plants for exhibitions should be re-potted by the middle of this month (see articles upon in former numbers); according to the size of the plants must be the pots. The smallest-sized pots in which plants are to be when shown are the 24's; they are eight inches in diameter; and the largest-sized are eleven inches in diameter. The plants need not be potted into these sizes now, but a size less, and in February be re-potted into their final pots. The plants must not be crowded together, but be kept apart.

CINERARIAS are often attacked at this season by the green fly; let the plants be placed in a hot-bed frame, and be fumigated with tobacco smoke at the first appearance of the insects.

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THE

FLORICULTURAL CABINET,

AND

FLORISTS' MAGAZINE.

JANUARY TO DECEMBER, 1848.

VOLUME XVI.

BIBLIOTHECA BODLEIANA

CONDUCTED BY

JOSEPH HARRISON.

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PREFACE.

THE present are most eventful TIMES, but there are conflicting opinions as to whether the events occurring be of that advancing, expanding, and improving character that the state of society demands. Although much uncertainty may exist on such matters, and there be disagreements relative thereto, there is one fact all agree in, TIME itself makes rapid and continual progress. This is a truth which none should forget, Editors of Periodical Publications scarcely can, they are, however, annually reminded (as we now are) that another year's labours have rapidly, almost imperceptibly, come to a termination, and that the day of their accountability to their supporters has arrived.

Sixteen volumes of our Magazine have, with unprecedented floral interest, been widely circulated throughout the world, and our labours have been attended with much delight. The pursuit we are engaged in we are satisfied is right, and congenial with the best feelings of mankind universally. Indeed, the interest which flowers have exerted so extensively, may be traced from the earliest ages to the present period. It has never been confined either to any particular class of society, or even quarter of the globe, but a Father's hand of beneficence has scattered vegetable beauties over earth's wide domain, to contribute to the existence of its inhabitants, and give to it a cheerfulness which should excite in them agreeable feelings. That such are the results is evident, for the savage of the forest, in the joy of his heart, binds his brow with the native flowers of his woods, whilst at the same time their cultivation increases in proportion as the blessings of a religious civilization extends.

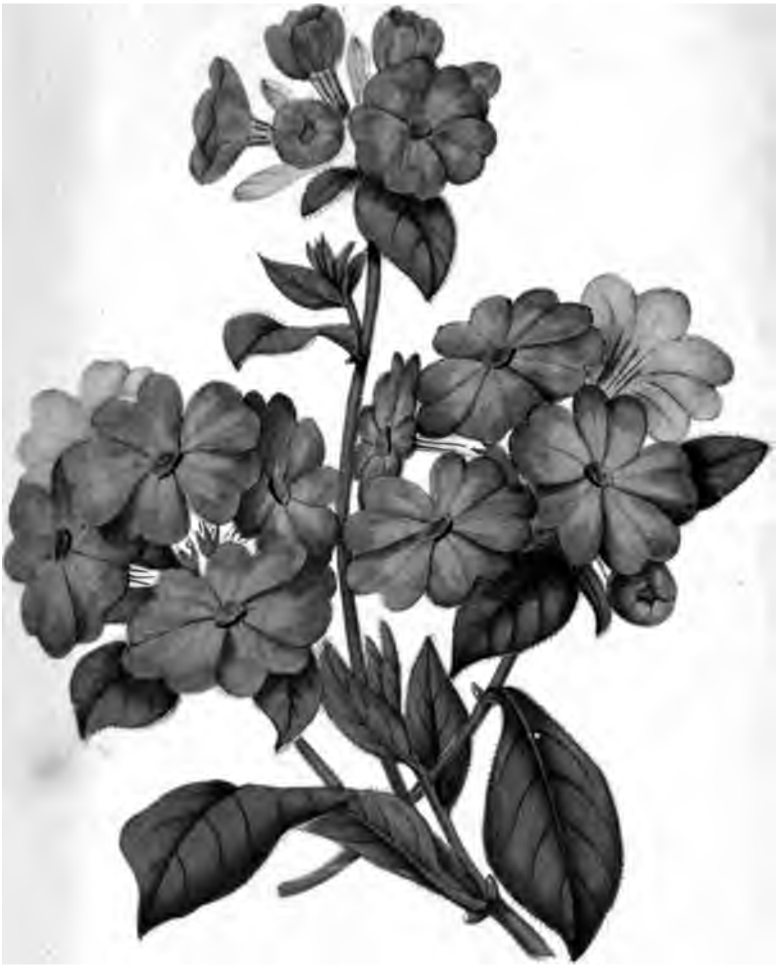
From the humble cottage garden to the finest parterre of the palace, nothing more conspicuously bespeaks the good taste of the possessor than a well-cultivated flower garden. Of all luxurious indulgences that of flowers is the most innocent. Of all embellishments they are the most beautiful, of perfumes they shed around the most fragrant, and of all created beings on earth man alone seems capable of deriving enjoyment from them; this, too, commences with his infancy, remains the delight of his youth, increases with his years, and becomes the quiet amusement of his age. Every rank of persons seem to enjoy flowers as a gratification, but to those whose attachment is ardent, as the Florist and the Botanist, there are beauties and wonders displayed that cannot be conceived by the careless beholder. It is a recreation which conduces materially to health, affords a succession of delights, and leads the mind to contemplate, with adoring wonder, the wisdom and goodness of the Creator.

We have long deemed it our duty and interest to use every exertion to promote the happiness of mankind, and considered it laudable to be thus engaged; but to be honoured to co-operate with those individuals who have so generously and extensively contributed to the pages of our Magazine during the period of sixteen years, is a position we very highly value. It is our earnest desire, and shall be our zealous endeavour, still to maintain that good feeling and mutual understanding with all our Contributors, Correspondents, and Readers which has for so many years been established. We tender our sincere thanks for all past favours, and very respectfully solicit their future assistance.

Twelve months ago we made engagements as to the application of our labours in the progress of our present volume. It has been our continuous aim fully to realize the same to the satisfaction of our Readers, and the increased demand for our Magazine assure us that our exertions have been approved.

Without being deemed ostentatious, we think we may justly affirm that the present volume is in all respects superior to any that have preceded it. We purpose entering upon our future labours with increased energy, and with the continued assistance of our friends, we shall endeavour still to improve upon the past.

Downham, *November* 26, 1848.



Plumbago Larpentæ.

FLORICULTURAL CABINET

JANUARY, 1848.

ILLUSTRATIONS.

PLUMBAGO LARPENTÆ.

Lady Larpent's Leadwort.

PLUMBAGINEÆ. PENTANDRIA MONOGYNIA.

THROUGH the kindness of Messrs. Knight and Perry, nurserymen, King's-road, Chelsea, we have the pleasure of introducing into our first number for the year 1848, this charming flower. It is a native of Shanghai, in China, and was found growing out of a crevice in the city wall. A plant of it was sent to this country by Mr. Smith, in May, 1846, to Sir George Larpent. We saw a plant exhibited at the Royal Botanic Society's exhibition last July, and we inserted a notice of it in our number for August. Since that time it has become the property of Messrs. Knight and Perry. In October, a plant of it, two feet high and two feet and a half across, was in bloom in their nursery, and had more than six thousand flowers, forming one mass of beauty.

It is a compact neat-growing half-shrubby plant, flourishes well in the greenhouse, where it forms one of its most lovely ornaments; but it is said to be quite hardy, as the thermometer in winter at Shanghai descends to nineteen degrees below the freezing point. It will, therefore, prove to be a most valuable plant for the flower-garden, either planted out singly or in masses. Messrs. Knight and Perry say, "it will rank with the Verbena," and, as an exhibition plant, it will equal the foremost. Dr. Lindley observes, "It is, doubtless, the finest hardy autumnal flower that has been obtained from China since the introduction of the Anemone Japonica," (figured in vol. i., New Series, p. 289.)

All the previously introduced species of Plumbago are interesting and beautiful. We have seen the P. capensis, pale blue flowered, flourish very vigorously, growing seven or eight feet high, and blooming profusely in the open air during the entire summer. It survived the last severe winter against the south aspect of a dwelling-house at Richmond, near London, and when in bloom, as above stated, was highly beautiful and interesting. The old inhabitant of our hothouses, Prosea, has long been a great favourite of ours. The old plant should be divided in February into portions that will furnish about four stems, have a very liberal draining, and a well-enriched loamy soil, and be grown in the hothouse.

The Prosea has long been introduced into this country, and had a place in select collections of hothouse plants. When properly cultivated, it is a most lovely ornament. We have had plants in profuse bloom during the period from April to November. The plan we pursued was to divide the previous year's plant into portions that would be likely to supply about three or four stems, about the middle of February, giving a liberal drainage, and a compost of well-enriched loam and leaf-mould. We grew it in the stove, giving it a liberal supply of water, and any attention to it was most abundantly repaid by long pyramid-formed spikes of lovely bright rosy-red flowers. When the growing season was over, less water was given, and but barely kept moist till re-potted.

This species ought to be in every stove. If the plant be brought forward in the stove till the flowers are just about to open, it may be placed in the greenhouse, where it will do well during summer.

NOTES ON NEW OR RARE PLANTS.

ACHIMENES SPEC. NOV.—NEW SPECIES.

Gesneraceæ. Didynamia Angiospermia.

In the nursery of Messrs. Knight and Perry, Chelsea, we recently saw a very distinct and interesting new species of Achimenes in flower. The habit of the plant is similar to the A. rosea, and the flowers are about the size of those of that kind, but of a clear white colour. It has a light and elegant appearance, and forms a very pretty contrast to the other kinds.

BROWALLIA SPECIOSA—SHOWY-FLOWERED BROWALLIA.

Scrophularineæ. Didynamia Angiospermia.

This is a very handsome plant, with flowers three times the size of *B. grandiflora*. Mr. Purdie found it growing upon the Quindiu and Tolima mountains, and forwarded it to the Kew Gardens, where we saw it in bloom in September last. The plant is very easily cultivated in the greenhouse, in ordinary soil, and it appears to bloom freely. The flowers are produced singly. The corolla is salver-shaped, near an inch and a half across, and divided into five ovate acuminate segments, of a bright purple colour above and pale lilac underneath; the throat clear white; the tube slender, rather more than an inch in length, and of a light rose or pink colour. The stems arise erect, becoming numerously branched, and are, with the whole plant, almost destitute of hairs. The leaves are mostly opposite, but sometimes alternate. (Figured in *Bot. Mag.*, 4339.)

CHÆNESTES LANCEOLATA—LANCEOLATE-LEAVED CHÆNESTES.

Solaneæ. Pentandria Monogynia.

The mountains of Quindiu presented this plant also to the notice of Mr. Purdie, and, from seeds transmitted by him, plants were raised at Kew, which bloomed, in a sheltered border out of doors, during the past summer and autumn. It is a shrubby plant, growing from four to six feet high, after the manner of *C. fuchsioides* (formerly *Licium fuchsioides* (figured in vol. xiv., p. 265), or *C. umbrosa;* to the latter it is more nearly allied, but differs in having larger, more lanceolate, pubescent leaves, and in the colour of its flowers, which are of a fine dark purplish-blue. The flowers are produced in umbels of from twenty to thirty in each, and are rather pendant. The corolla is about two inches long, spreading out a little at the mouth, and divided into five short segments. The leaves are ovate, acute, tapering to the footstalks, downy, especially when young, but, as they advance in age, become almost glabrous. It is a deserving plant, on account of its rich intense colour. (Figured in *Bot. Mag.*, 4338.)

CYMBIDIUM EBURNEUM—IVORY CYMBID.

Orchidaceæ. Gynandria Monandria.

Messrs. Loddiges, of the Hackney Nursery, received this plant from the East Indies. It is a delightfully fragrant and pleasing species, the flowers being entirely of a pure ivory-white, with the exception of a single yellow stripe down the middle lip. Each flower is about four inches across. It succeeds when grown in a mixture of rough sandy peat and light loam, the pots being well drained, and, when growing freely, liberally supplied with moisture. (Figured in *Bot. Reg.*, 67.)

EXACUM TETRAGONUM, var. BICOLOR—TWO-COLOURED SQUARE-STALKED EXACUM. Syn. EXACUM HAMILTONII (*Don*).

Gentianeæ. Petrandria Monogynia.

Received into the Kew Gardens in 1846, from the East Indies, where it was found by J. E. Law, Esq., growing amongst long grass in the Concan. It is an annual stove plant, growing from one foot to one foot and a half high. The flowers are produced in panicles, not very numerously, and are very variable in size and colour, the largest being each from two to three inches across, and the colour of intermediate shades between almost white and purple. It flowers in June, and is rather ornamental. (Figured in *Bot. Mag.*, 4340.)

FRANCISCEA GRACILIS—SLENDER FRANCISCEA.

Scrophularineæ. Didynamia Angiospermia.

In the nursery of Messrs. Knight and Perry this new and very pretty stove shrub has recently bloomed. The flowers are of a delicate pale cream colour, the corolla being near an inch and a half across, and the slender tube four inches long. It flowers freely, and forms a very handsome plant.

GARDENIA NITIDA—GLOSSY-LEAVED GARDENIA.

Rubiaceæ. Pentandria Monogynia.

Mr. Whitfield discovered this very distinct species at Sierra Leone, and from a dried specimen which he had collected, Messrs. Lucombe and Pince, nurserymen, Exeter, took some seed, and raised plants, which have lately bloomed. It proves to be a plant of fine habit, being very compact and of stiff-growth; the foliage large, dark glossy-green; the flowers, produced solitary, are of the purest white, and deliciously fragrant; the tube is about two inches and a half long, and the corolla is divided into seven segments of two inches long, which reflex soon after opening. It is one of the most distinct and desirable of the genus. (Figured in *Bot. Mag.*, 4343.)

GESNERIA TRIFLORA—THREE-FLOWERED GESNERIA.

Gesneriaceæ. Didynamia Angiospermia.

Mr. Purdie sent this new species to the Royal Gardens at Kew, from New Grenada. The flower stem rises erect to about two feet high, producing from the axils short foot-stalks, bearing umbels of three tubular flowers, each near an inch long, yellow, densely covered with shaggy red hair; the mouth of the tube is divided into five short expanded roundish lobes, marked by a few red spots. The species bears resemblance to *G. Hondensis*, the flowers and foliage being rather larger. It is not very ornamental.

GONGORA MACULATA, var. TRICOLOR—THREE-COLOURED SPOTTED GONGORA.

Orchidaceæ. Gynandria Monandria.

This pleasing variety of *G. maculata* was discovered growing upon the mountains near Panama, in 1841, by J. Maclean, Esq., of Lima, who transmitted it to the Botanical Gardens of Liverpool. It is also stated to have been sent from Peru. The singular form and colours assumed by the flowers of this plant renders it highly deserving of cultivation. Each blossom is about two inches in diameter; the ground colour is yellow, with the exception of the lip, which is white, and the whole banded or blotched with reddish-brown. (Figured in *Bot. Reg.*, 69.)

NYMPHÆA SPEC. NOV.—NEW SPECIES.

Nymphæaceæ. Polyandria Monogynia.

This is a handsome aquatic, with large pure white flowers, measuring nearly six inches across, highly fragrant, and the foliage is very beautifully reticulated. The blossoms expand early in the evening, and close about eight in the morning. It has flowered in the stove of Messrs. Knight and Perry, at Chelsea.

ONCIDIUM AMICTUM—FRILLED ONCID.

Orchidaceæ. Gynandria Monandria.

Introduced from Brazil by the Messrs. Loddiges, with whom it bloomed early in last spring. It is a very beautiful species of this handsome genus; the flowers, which are produced freely in large panicles, are about an inch across, of a clear yellow ground colour, spotted with red. The species bears some resemblance to *O. Gardneri*, but differs in having larger wings to the column, the anther bed being margined by a kind of membranous frill, greater basal lobes, and by possessing an inversely wedge-shaped lip. (Figured in *Bot. Reg.*, 66.)

ONCIDIUM CURTUM—CROP-EARED ONCID.

Orchidaceæ. Gynandria Monandria.

This new and desirable species is in the collection of Messrs. Veitch and Son, of Exeter, but we have not learnt from whence it was introduced. It appears to be allied to *O. pectorale*, but the flowers are rather smaller, and in colour are diversified with broader bands of brown, and there is some little distinction in the formation of the several parts. (Figured in *Bot. Reg.*, 68.)

ONCIDIUM PELICANUM—PELICAN ONCID.

Orchidaceæ. Gynandria Monandria.

Count Karwinsky sent this plant from Mexico to Messrs. Loddiges. It is nearly related to *O. reflexum* in habit, colour, and form. The specific name is presumed to have been given from a fancied resemblance of the column of the flower to a pelican pecking her breast.

SOBRALIA MACRANTHA, var. SPLENDENS—SPLENDID LARGE-FLOWERED SOBRALIA.

Orchidaceæ. Gynandria Monandria.

This handsome orchid is in the collection of Messrs. Rollisson, nurserymen, Tooting, who purchased it amongst some lots of plants sold by auction, which had been collected in South America by Mr. Skinner. The plant is somewhat dwarf, growing from two to three feet high. The flowers are about seven inches in diameter, and very showy, being of a deep rich crimson-purple colour. "The genus Sobralia," Dr. Lindley observes, in his *Sertum Onchidaceum*, "is one of the most remarkable among orchids, with its lofty reedy stems, large Lily-like flowers, and stiff plaited leaves, which resemble those of the smaller kinds of palm tree. It is found in Peru, in Brazil, and in Mexico, where the species are amongst the most stately inhabitants of the bush. They consist of terrestrial perennial plants, with simple roots, and stems not uncommonly growing three times as high as a man, very rarely branched and thickly clothed with leaves. Their inflorescence consists of terminal racemes, loaded with snow-white, pink, crimson, or violet flowers. The lip of all the species is wrapped round the column, whence it appears as if funnel-shaped, and is bordered by a lacerated fringed edge. The species inhabit dry, sunny, rocky, and very hot places, where they often form extensive thickets. A few are sweet-scented, and of some the flowers last for only a short time." (Figured in *Bot. Mag.*, 241.)

STENORHYNCHUS CINNABARINUS—CINNABAR STENORHYNCHUS.

Orchidaceæ. Gynandria Monandria.

Messrs. Loddiges obtained this rare plant from Mexico, and bloomed it last summer. The flowers are produced in a long erect spike, and are of a clear yellow in the inside, and outside a bright vermillion-red, which striking contrast gives a showy appearance to the plant.

THIBAUDIA PICHINCHENSIS, var. GLABRA—GLABROUS PICHINCHA THIBAUDIA.

Ericaceæ. Decandria Monogynia.

This is a very beautiful greenhouse branching shrub, growing about two feet high, although on the elevated mountains of Columbia it is stated to attain a height of ten to twelve feet. The flowers are produced in racemes of from four to six, or more, in each. The corolla is a bright rosy-pink, as waxy as that of any Heath, urceolate, about an inch long, with five equal spreading limbs at the mouth. The foliage is a bright green, and very ample. Mr. Purdie sent it to Kew, where it has lately been in bloom. It is a highly beautiful plant, deserving of general cultivation. (Figured in *Bot. Mag.*, 4344.)

NOTES ON FLORISTS' FLOWERS.

THE NEW DAHLIAS FOR 1848.

AMONGST the numerous seedlings which we have seen exhibited during the past season, very few of them appeared particularly striking or novel, though the generality were what is termed useful, that is, being no great improvement upon others of similar colours already out, yet in some point desirable, if not preferable. The following notes were made with very great care, and may be relied upon; they comprise, we believe, all the kinds which were produced at the principal shows.

AMY ROBSART (Keynes).—Shaded blush, double, of medium size; outline broken, general form not at all more than second-rate.

BELLA DONNA (Harrison).—" A fancy flower, a singular red with white tips, size medium, very double, symmetrical, and well up; outline not first-rate, but the flower an acquisition."—*Glenny's Notes.*

BOULE DE FEU (Barnes).—Bright light red, rather fading to an orange tint at the ends of the outer circles of petals; very double, of medium size, well up in the centre; disposition of petals and outline exceedingly true. One of the best flowers of the season, notwithstanding its particular fulness causes it occasionally to quill a good deal.

CANARY (Turner).—Pale primrose or canary colour, of good medium size, outline not quite true, and face flat; centre even, compact and regular in arrangement, and is a neat-looking flower.

CHARLES TURNER (Turville).—Blush, with a tinge or lace of lilac at the end of the petals; centre well up, of fair size, symmetrical, but not a good outline.

COMPACTA (Pope).—Light purple, size barely large enough even for a front row, good centre and outline, and very compact form.

CROCUS (Barnes).—Rich yellow, middle size, centre tolerably even, general shape good.

DANE CROFT HERO (Barnes).—Bright claret colour, medium size, centre well up, occasionally deficient in arrangement, but a useful-looking flower.

Delight (Whale).—White, laced with deep purple, full size, very true outline, of great depth, and symmetrical in arrangement. The only blooms we saw were overblown, but the evidence of a first-rate character was ample.

Duchess of Sutherland (Turville).—A fancy flower, crimson with white tips, middle size, centre low, arrangement moderate.

Eliza Miellez (Turner).—Light yellow, with a deep, rather dull, crimson lace, nicely cupped, but rather thin in the face, novel, and occasionally may be useful for a front row, the size being rather below medium.

Fire King (Turville).—Exhibited as a seedling of 1847; brilliant scarlet-orange, good medium size, well-formed petal and outline, low eye, average arrangement; when perfect, a very striking flower, on account of its colour.

Fire King (Harrison).—" Bright red, not, however, so bright as the first Fire King we noticed, but much darker shade; size average, nothing remarkable in the form, but centre pretty good."—*Glenny's Notes.*

Forest Flower (Bragg).—Deep lilac, tolerable centre and well arranged, but so very large that it is coarse-looking.

Gem (Oakley).—Clear white, with a distinct lace of lilac, not at all times regularly marked throughout the flower, but when in true colour very striking; medium size, centre well up, and the arrangement symmetrical.

Helen Carr (Barnes).—Blush, deeply tinged with pink, middle size, general form good enough for a second-rate flower, but no particular acquisition.

Jane (Proctor).—Blush-white, large size, centre disproportionately large, face of the flower flat, and the outline not good.

Jeanie Deans (Harrison).—" A really fine and well-formed deep red and white fancy flower, very double and symmetrical, very distinct, and a pretty variety for one or half-a-dozen; size medium."—*Glenny's Notes.*

Jenny Lind (Barnes).—Dark maroon, with white tips, middle size, good centre, at times irregular in arrangement; the petals are rather too long, but on the whole it is one of the most desirable fancy flowers yet raised.

Lady Ashley (Drummond).—Distinct lilac, below medium size, centre rather low, fine cupped petals, well disposed, and the outline complete.

Lady Buxton (Turville).—Fancy flower, orange, with a small white tip; middle size, centre good, the arrangement and outline tolerable.

Lady Sale (Harrison).—" A rich fancy flower, pure yellow and white tips, good average form, full medium size, double, symmetrical, and a good centre."—*Glenny's Notes.*

Louisa (Whale).—Blush-white, of good medium size, eye rather sunk; a tolerable second-class flower.

Maid of Honour (Harrison).—" A light blush, with occasional shades of darker colour, without any very remarkable properties; a sort of common-place form, but delicate colour."—*Glenny's Notes.*

Mont Blanc (Gaines).—White, above the medium size, centre well up, arrangement generally symmetrical, rather coarse-looking, and the outline not very true, but the flower is an acquisition.

Mrs. Shaw Lefevre (Bragg).—A fancy flower, crimson, with white tips; rather under middle size, centre and outline good, the arrangement symmetrical; a very neat and pretty flower.

Nell Gwynne (Pope).—Pretty primrose colour, good size, fairish outline, and well arranged; the eye sunk, but a very desirable flower on account of the colour.

Primrose Superb (Gaines).—Very pale yellow, dying off to a faded amber; centre even, average size, compact and neat form, but flat in the face.

Queen of England (Dod).—White, laced very distinctly with dark crimson; shown in a large and to all appearance overgrown state; fine cupped petal and unbroken outline, of great depth, centre a trifle low; likely to be a fine flower when produced in condition.

Remembrancer (Barnes).—Light red, with a dingy white tip, middle size, good centre and general form; has the appearance of being constant, and is an acquisition.

Robin Hood (Barnes).—Also a fancy flower; scarlet, with milky-white tips; good cupped petal, but rather irregular and low in the eye.

Samuel Girling (Barnes).—Bright crimson-puce, middle size, very true centre and well up, full and mostly symmetrical, but sometimes inclined to quill.

Shylock (Collison).—Rich scarlet, average size, excellent centre, perfect outline, and very uniformly arranged; rather too open on the outside, but one of the best flowers of the season.

The Hero (Turner).—Crimson, disproportionately large in size and necessarily coarse-looking, but the flower is not without good properties, and if moderately grown might be useful in a back row.

Walter Hillson (Dod).—Distinct orange, full medium size, perfect outline, and symmetrical, but flat in the centre.

War Eagle (Keynes).—Heavy or dark rich red, middle size, rosette in the outline, of good average form.

PROPERTIES OF POPULAR FLOWERS.

Plain rules of criticism, by which the properties of flowers may be fairly estimated, are necessary to be well known by every florist of any pretensions; and a man, to be a good judge, ought to be so well versed in these rules as to be able to go in among a lot of flowers with a true model so perfectly impressed on his imagination that he can instantly detect imperfection, and readily decide to what extent they are sufficient to justify the rejection of the flower. We have read a little work, just published by Messrs. Houlstone and Stoneman, containing a collection of all the separate essays written by Mr. Glenny on the properties of popular flowers; to all the more particular points therein laid down we entirely acquiesce, and recommend the book to floral societies and florists generally. A considerable space is devoted to each flower, but the following is an abstract containing a complete outline of them.

THE AURICULA.—Pip round, flat, and smooth-edged; the edging, colour, and eye, circles of the same width; tube small, and bright yellow, filled with thrum; paste smooth and white; truss seven pips, edge to edge; leaves to form a green back ground; stem stiff, six to nine inches; pairs the same heights, but different colours.

THE POLYANTHUS.—Edge scolloped but slightly, in other respects circular; the yellow eye round, tube filled with thrum; centre divisions of the petals similar to the side, the lacing even down to the eye, and the same colour; truss as the Auricula, but no back leaf.

THE TULIP.—From one-third to one-half a hollow globe; edge smooth and even, petals thick, marking unbroken round the edge; all six petals alike; colours well defined, and the base free from stain; the white or yellow, or any shade between them, must be all over alike; the stem stiff, from eighteen inches to three feet in length.

THE HYACINTH.—Pips half a ball, close, with stiff foot-stalks, standing well out; the spike compact, and tapering from the bottom to the top.

THE CROCUS.—Form like the Tulip; petals thick, edges smooth; colour bright or dense, and, if variegated, the marking distinct and well defined; all six petals alike.

THE CINERARIA.—Flowers round; petals broad and thick, smooth in texture, and blunt at the ends, sitting very close; centre small; colour bright or dense; and the outside of the pip free from notches.

THE RANUNCULUS.—Two-thirds of a ball, well filled up; the petals thick, close, smooth-edged, and symmetrical; centre up to surface.

THE PANSEY.—A perfect circle, smooth edged, petals thick; velvetty texture; marking uniform; top petals alike, side petals alike; the ground colour on the three lower petals the same, and the eye *must not break through to the margin.*

THE DAHLIA.—Two-thirds of a ball, well filled up to the centre; petals free from notch, thick, broad and smooth at the ends; must not show the back of the petals, which must lay symmetrical, and imbricate to the centre.

THE GERANIUM.—A circle, without indentation; smooth at the edges, thick, rich texture; colours well defined; truss five pips or more, forming a large showy head of bloom; marking decided, the greater contrast the better.

THE VERBENA.—Pips round, free from notch; substance thick, fine texture; truss large, pips edge to edge, not less than thirteen in a bunch; colour very dense or bright, and all the pips alike.

THE NARCISSUS.—A circular flat dish, cup prominent, colours distinct, foot-stalks well out, flowers edge to edge, and not less than seven; white very pure, yellow very dense.

THE CARNATION AND PICOTEE.—Half a ball, outline round, petals imbricated, thick and smooth edged, colours dense and distinct, white pure; every petal the character of the flower, whether flake or bizarre; for a Picotee, there should be no mark that does not come from the edge.

THE PINK.—Half a ball, petals thick, edges smooth, lace round every petal, eye colour of the lacing.

THE CHRYSANTHEMUM.—Half a ball, double, symmetrical; centre well up and perfect; petals broad, blunt, and thick; colour decided, and every petal free from notch.

THE RHODODENDRON.—Flowers round, slightly cupped, large, well spotted, smooth edged, thick; colour dense, and truss a bold, round-sided cone; foot-stalks thick and elastic.

THE AZALEA INDICA.—Flowers round, petals thick, fine texture, smooth edges, colour dense; marking, if any, well defined.

THE ROSE.—All kinds to have thick, smooth-edged, stiff petals, plenty of them, imbricated to the centre; fragrance strong, foot-stalks long and stiff, form half a ball, colour dense, be it what it may, back of the petal same colour as the front.

Moss Roses cannot be too thick of moss, and the larger the calyx the better.

Climbing Roses to be short-jointed and abundant bloomers.

Noisette Roses to be in good bunches, with strong foot-stalks to hold them in their places.

THE CAMELLIA JAPONICA.—Form half of a ball, petals thick, broad, and smooth at the edge, and imbricated to the centre; colour dense, or, if white, pure; if blotched or striped, a distinct contrast; plant short-jointed and bushy; foliage large and bright.

THE CALCEOLARIA.—Bloom perfectly round; colour, back bright as front; lip, throat, and calyx, small; markings, if any, decided and dense; substance thick and stiff; stems strong and branching; foot-stalks elastic; plant decidedly shrubby, and the bloom just above the foliage.

THE FUCHSIA.—The flower-bud round, without tube; the sepals to reflex, so as to form a globe, showing the inside surface; corolla a decided contrast to the sepals; colour bright, and no green; foot-stalks long, wiry, and pendulous; flowers at the base of every leaf; foliage bright and close, bloom to hang free, habit shrubby, stems strong.

THE PETUNIA.—Flowers round, thick, smooth-edged; colour distinct, and, if variegated, the contrast to be decided; veins, stripes, or blotches, well defined.

THE SWEET WILLIAM.—Truss large, flowers edge to edge, round, flat, thick, smooth-edged, colour pure, free from speckles.

THE ANEMONE.—Petals form a circular flat dish, florets form half a globe in it; the florets a different colour to the petals, the greater the contrast the better; colours dense and decided.

THE IRIS.—Three chief petals, reflexing to an arch or half a globe, and wide enough to touch; colour brilliant, thick and velvetty; the three inner petals to stand up, and be of a different colour; texture smooth, like wax.

THE MIMULUS.—Petals thick and velvetty texture, the turn-over portion to be large, circular, and conceal the divisions; colours bright or dense, ground all alike in shade, blotches well defined, plant dwarf, flowers abundant, and mouth upwards, to show the inside.

THE LILY.—Blooms large, petals wide, thick, rich in texture, reflexing to half a globe or more, to show none but the under surface, colours pure, blotches well defined, habit dwarf, seven flowers in pyramidal spike, the same length as the part below it.

THE LICHNYS.—Plant dwarf, blooms large and circular, edges smooth, petals thick, colour dense, flowers edge to edge, forming a bold large head; the double similar, but with two rows more petals, different sizes and smaller.

FOXGLOVE.—Blooms bright outside as in, tube large, mouth wide, smooth on the margin, colours contracted, petal thick, footstalk strong, spike of flowers same length as the plant below it.

CAMPANULA.—Bell-shaped, same width as depth, mouth reflexed, outside as bright as inside, edge smooth, petal thick, colours dense.

CROWN IMPERIAL.—Plant dwarf from the ground to the bloom the same height as its diameter, the flowers to touch and hang two inches from centre stem, texture thick and rich, form tubular, mouth wide, edge reflexed, smooth and thick, colour dense or bright, and all alike from pale straw to deep orange; crown same height as the flowers occupy below it.

THE PEONY.—Petals thick, broad, smooth at the edges, rich in texture, flowers large, double, symmetrical, and abundant, each forming half a ball, colour dense, foliage small, joints short, habit bushy, flowers just beyond the leaves.

THE PHLOX.—Flowers round, thick, flat, smooth, large, setting edge to edge, and forming a bold, large truss. Plant dwarf, stems short, footstalks stiff, and long enough to well expand the truss, colour dense, marking decided. Double flowers must be round on the face.

THE LUPIN.—Long spike pyramidal form, flowers close together, thick in substance, all on the spike in flower at once, short plant, no stem between the foliage and flowers.

THE AMARYLLIS.—The flower convolvulus form, and as open; no indentations where they divide, flower thick, round, smooth at the edge, velvetty texture, brilliant in very decided colours, perfectly free from green, and if variegated, the marking well defined. Truss not less than five, just above the foliage.

OF ANNUALS.—1, abundance of flower; 2, breadth of petal; 3, smoothness of edge; 4, elegance and compactness of form; 5, thickness of petal; 6, brilliance of colour; 7, continuous blooming; 8, fragrance. These are the characteristics that keep some annuals favourites, and by universal consent, the opposite condemn many that, with all the arts of trade, cannot be maintained; some one or other of these qualities keep the following in all but universal culture:—

Nemophylla insignis, Phlox Drummondi, Dwarf Rocket Larkspur, Collinsia bicolor, Erysium Perofskianum, Ten Week Stock, Convolvulus minor, Balsam, Mignonette, Sweet Pea, and others.

SKETCH OF A VISIT TO CHINA IN SEARCH OF NEW PLANTS.

BY MR. R. FORTUNE.

MOST of our readers are aware that Mr. Fortune was sent out to China by the Horticultural Society, in order to obtain some of the fine plants of this very extensive but hitherto almost unexplored country. Mr. Fortune succeeded in sending over to the Society many very valuable plants. From time to time we have had the pleasure to notice many in our Magazine as they have bloomed. The observations Mr. Fortune makes of his proceedings during his labours there are very interesting, and may prove useful to some of our readers in attempts to obtain other new plants from that country, from persons resident there. We extract a portion of the details as given by Mr. Fortune, and inserted in that interesting and useful publication, the *Journal of the Horticultural Society*, which work we recommend our readers to procure:—

" As it was autumn when I was travelling in the north of China, many of the plants on the hills were in seed, and it was impossible for me to say whether their flowers were ornamental or not. I made a selection, however, upon chance, considering that there would be, at least, some good things amongst them, and that by this means a season would be gained. I did not intend them to be given out to the country until they were proved at the garden, or until I could have an opportunity of seeing them in bloom on the Chinese hills, and of sending a description home. The seeds being in good condition were soon raised, and unfortunately many of them were given way which did not prove at all ornamental. Others, however, were really valuable things, amongst which I may mention the Buddlea Lindleyana, the Azalea ovata, and the Cryptomeria japonica.

" The plant cases to which I have already alluded contained amongst other things the following, many of which have been already given away to the Fellows of the Society:—

Chirita sinensis
Arundina sinensis
Spathoglottis Fortuni
Fingered citron (true)
Campanula grandiflora
Azalea obtusa
,, ovata
,, squamata
Abelia rupestris
Buddlea Lindleyana
Anemone japonica
Lycoris radiata?
Daphne Fortuni
Forsythia viridissima
Jasminum nudiflorum
Weigela rosea
Indigofera decora
Cryptomeria japonica

and 12 or 13 very fine new varieties of the Tree Pæony, having several shades of purple, lilac, deep red, and white flowers. Besides these, the cases contained a number of valuable plants which have not flowered, and about which little is at present known.

" While I was waiting in the south of China for the despatch of the collections just noticed, I took the opportunity of visiting Canton and Macao at two different times, and saw the Camellias, Azaleas, Moutans, and other plants in bloom. The gardens of the Hong merchants and the nurseries at Fa-tee are particularly gay during the spring months with these flowers. The Moutans are yearly brought down from the north to Canton, where they flower shortly afterwards, and are then discarded as useless, as the climate of the south of China is too hot for them; this trade, therefore, is not unlike that of Dutch hyacinths in Europe.

"The mountains near Canton, which I visited in company with the late Mr. Lay, as well as those of Hong Kong, were very gay at this season with the flowers of the beautiful Enkianthus reticulatus, Azalea squamata, and various other species. This part of China, however, had little to increase my collections, and on the 26th of March I started again for the northern provinces.

"The whole of this season was spent in the Chusan, Ningpo, and Shanghae districts, my principal object being to see all the plants of these places in flower, and to mark those which I wanted for seed. In order to do this effectually I was obliged to visit each district three or four times during the summer and autumn.

"The Flora of Chusan, and all over the mainland in this part of China, is very different from those portions of the south which I have already described. Almost all the species of a tropical character have entirely disappeared, and in their places we find others related to things found in the temperate parts of the world. I here met for the first time the beautiful Glycine sinensis wild on the hills, where it climbs in hedges and on trees, and allows its flowering branches to hang in graceful festoons by the sides of the narrow roads which lead across the mountains. The Ficus nitida, so common around all the temples and houses in the south, is here unknown, and many of those beautiful flowering genera which, as I before remarked, are only found on the top of the mountains in Hong Kong, here have chosen less exalted situations; I allude more particularly to the Azaleas which abound on the hill sides of this island. Most persons have seen and admired the Azaleas which are yearly brought to the Chiswick fêtes, and which, as individual specimens, surpass, in most instances, those which grow and bloom on their native hills; but few can form any idea of the gorgeous and striking beauty of these Azalea clad mountains, where on every side, as far as our vision extends, the eye rests on masses of flowers of dazzling brightness and surpassing beauty. Nor is it Azaleas alone which meet the eye and claim our attention: clematises, wild-roses, honeysuckles, the Glycine sinensis, noticed above, and a hundred other things, mingle their flowers with them, and make us confess that, after all, China is indeed the 'central flowery land.' There are several species of Myrtaceous and other Ericaceous plants, which are also common on the hills, but no species of heath has been ever found; and I believe the genus does not exist in this part of China.

"The tallow-tree (Stillingia sebifera) is abundant in the valleys of Chusan, and large quantities of tallow and oil are yearly extracted from its seeds. The Laurus camphora, or camphor-tree, is also common, and attains a very large size, but, so far as I know, no camphor is extracted or exported from the island. Thea viridis—the green-tree shrub—is cultivated in some parts rather extensively; but if we except a small qnantity of tea, which is annually sent over to Ningpo and the adjoining towns on the mainland, the whole of the produce is used by the natives themselves. Every small farmer and cottager has a few plants on his own premises, which he rears with considerable care, but seems to have no wish to enter on its cultivation on a larger scale for exportation. Indeed, it is questionable if it would pay, as the soil is scarcely rich enough; and although the shrub grows pretty well, it is far from being so luxuriant as it is in the larger tea-districts of the mainland, which I afterwards visited.

" The forests of different varieties of Bamboo are very striking, and give a kind of tropical character to the scenery of this part of the country. I do know anything more beautiful than the yellow Bamboo, with its clean straight stems and graceful tops and branches waving in the breeze; it always reminded me of our young larch forests in England. The Pinus sinensis noticed in the south is also common here: it seems to be an exception to the general rule, being found over all the country, and in every degree of latitude. The Cunninghamia sinensis is also found in abundance; and besides these there are several species of Cypress and Juniper found growing around the tombs of the rich, which are scattered over the valleys and hill-sides.

" The fruits of Chusan are of very little importance; nearly all the peaches, grapes, pears, plums, oranges, &c., which are seen in the summer season in the markets are brought from the mainland. There are two fruits, however, cultivated on the island, which are of considerable excellence; the one is called by the Chinese Yang-mae; it is a scarlet fruit not unlike an Arbutus or Strawberry, but having a stone like a plum in its centre; the other is the Kum-quat, a small species of Citrus, about the size of an oval gooseberry, with a sweet rind, and a sharp acid pulp.

" The new plants of the island were seen in flower this season for the first time. Early in the spring the hill-sides were covered with a beautiful Daphne with lilac flowers (Daphne Fortuni), and the Azalea ovata, certainly one of the finest and most distinct species which I have introduced. Weigela rosea, one of the most beautiful shrubs of northern China, which was first met with in the garden of a Mandarin near the city of Tinghae on this island, was this spring loaded with its noble rose-coloured flowers. Buddlea Lindleyana was also seen this year in great perfection growing in the hedges on the hill-sides, often side by side with the Glycine sinensis.

" Ningpo is about 40 miles west from Chusan, and is situated on the mainland. My visits here at different times during this summer were attended with much less difficulty than in the preceding autumn. I was now beginning to speak a little Chinese, and was perfectly acquainted with the town, and the whole of the places where the different Mandarins' gardens and nurseries were situated. This was of much importance, as I was able to save so much time which used to be formerly spent in fruitless inquiries. The Mandarins were particularly inquisitive at this time about everything which related to the movements of the English, or other foreigners, who were likely to establish themselves at their port; and as we were able to keep up a conversation in Chinese, I soon found that my frequent visits were very agreeable to them. The nurserymen too, having found, I suppose, that my money was as valuable to them as that which they received from their own countrymen, were no longer shy, but most anxious to sell me any plants which I wanted.

"The gardens of the Mandarins, although small, were extremely gay, particularly during the early months of the year; and, what was of more importance to me, contained a number of new plants of great beauty and interest. On entering one of the gardens on a fine morning in May, I was struck with a mass of yellow flowers which completely covered a distant part of the wall; the colour was not a common yellow, but had something of buff in it, which gave the flowers a striking and uncommon appearance. I immediately ran up to the place, and to my surprise and delight found that I had discovered a most beautiful new yellow climbing rose. I have no doubt, from what I afterwards learned, that this rose is from the more northern districts of the Chinese empire, and will prove perfectly hardy in Europe. Another rose, which the Chinese call the "five-coloured," was found in one of these gardens at this time; it belongs to the section commonly called China roses in this country, but sports in a very strange and beautiful manner. Sometimes it produces self-coloured blooms—being either red or French white, and frequently having flowers of both on one plant at the same time—while at other times the flowers are striped with the colours already mentioned. This will also be as hardy as our common China rose. Glycine sinensis is often grown on a flat trellis in front of the summer-house, or forms a kind of portico, which affords a pleasing shade from the burning rays of the summer's sun. Entwined with one of these trees I found another variety, having very long racemes of pure white flowers, which contrasted well with the light blue of the other. I immediately asked permission from the old Chinese gentleman to make some layers of this fine plant, and I happy to say that one of these is now alive at the garden at Chiswick. Several other fine plants were procured about this time, which will be described from time to time in the *Journal of the Horticultural Society*.

"After seeing the different gardens and nurseries in the town, I generally left Ningpo for the hills in the district. The natives in this part of the country, as I have already stated, are quite a different race from those in the south, and perfectly harmless in their dispositions: I have often resided amongst their mountains for weeks at a time, and never had any reason to complain of the treatment I received at their hands. The temple of Tein-tung, a large monastic building situated amongst the green-tea hills about 20 miles from Ningpo, was a favourite place of resort, owing to the peculiar richness of the vegetation in this part of the country. Here many of the trees and shrubs, which were only found in gardens in other places, were wild on the hills and in the hedges. The Forsythia already named was common on the road-sides, and was covered with its bright-yellow flowers in early spring. Several species of Viburnum of great beauty, and one Hydrangea, were also met with here, besides all the other plants which have been already noticed as abounding on the hills of Chusan. Cryptomeria japonica formed one of the most beautiful and stately trees which are found on the hill-sides; it grows about as tall as a common pine, the stems are perfectly straight, its branches hang drooping down in a most graceful manner, and altogether it is not unlike the Araucarias of Norfolk Island or Brazil, but probably much more hardy. The wood possesses great strength and durability, and is highly prized by the higher classes amongst the Chinese. Paulownia imperialis, Lilium japonicum, and several other well known Japanese plants, are also indigenous to this part of China, which shows that the vegetation of the two countries must be very much alike."

ON PREPARING DOUBLE FLOWERING TEN-WEEK AND GERMAN STOCKS FOR BEDDING, &c.

BY FLORA.

My floral ground is not extensive, hence I am desirous to have the flower beds furnished with the best flowers. Stocks are great favourites; I therefore provide a sufficiency of double-flowering plants to fill the beds allotted for them, by which means I not only secure double flowers, but the true colour desired. I used to do this by having, in the first instance, the infant plants potted in small pots, and a selection made therefrom; but this being somewhat expensive, and requiring a proportionate share of attention in watering, &c., I was led to adopt another readier and cheaper method, which has fully realized all my wishes in the matter. I sow my seeds and raise the young plants in the usual manner. At the time they are fit to transplant, I have a bed prepared as follows:—I select a warm, sheltered situation in the open ground, throwing out about four inches deep of the soil; this being done, I beat the surface very firm and compact, so as to have it as is usually termed a hard face. Upon this I have the soil, if good, which had been thrown out returned into the bed, so that it be about four or five inches deep, the surface being smoothed and even, and the soil being close enough that when opened to plant in the mould, is not so loose as to run into the holes made by a dibber.

I have a dibber that has the point formed as follows:—four inches of the lower end is covered by an iron plate, which at its upper circumference is three inches across. This being pressed into the soil, leaves a hole four inches deep and three across at the mouth; having made such in regular arrangement, I press them full of fresh moss, and make a hole in the middle of each; I then place a plant in it and fill up the vacancy with some fine rich soil, and press it so firm as to support the plant in its situation. Water is also given to settle the soil to the roots, &c.

By the usual attention the plants soon showed themselves, whether single or double flowers, and the firm under-ground prevented the roots from penetrating into it, and caused the production of numerous fibrous ones. The roots had filled the balls of moss, and I had them removed entire with facility, and causing no check whatever; and the proportionate increase of small fibrous roots induced a vigorous growth and bloom.

ON GARDENING INSTRUCTIONS.

BY MR. CHITTY, STAMFORD HILL.

It has been said, "The end of all knowledge is to make men better." With a little transposition and addition, the remark may stand thus:—"The end of all the information conveyed in gardening periodicals and standard publications is, to qualify gardeners for the efficient performance of their multifarious duties. The first requisite to success is that enthusiastic attachment and indomitable perseverance which can only result from a native taste, and then to sustain that attachment with undiminished vigour, and give it in many instances a praiseworthy and useful direction. Nothing is better calculated than an attentive perusal of the different periodicals as they issue from the press, containing, as they do, detailed modes of improvement in the culture of useful and ornamental plants, &c.; the descriptions of new plants and flowers considered worthy of attention; the reminiscences of valuable old plants, which but for the timely and judicious reference so frequently made to them, would in many cases pass into oblivion; and for the edification of the scientific, occasional papers upon the analysis of soils, &c.. And by no means the least useful portion of matter in these works is that included under the heads of "Calendar of Operations," "Floral Operations for the Month," &c. &c.; for although in these days little that is new can be produced in this shape, yet to persons really and deeply interested in their profession it answers a most useful purpose by refreshing their memories as to those duties which require prompt and immediate attention. Be it so, that all that is necessary to be known and reminded of may have found expression in former years, it will nevertheless be admitted by every reflecting person, that the necessity of attending to anything worth doing or knowing, requires to be reiterated upon our notice; and were it not that these monitory pages were placed in our hands just at the moment they are likely to be of the most service to us, say at the commencement of each month, would there not be some danger of entire omission of several important and necessary operations, or at least of so deferring them as to endanger the chance of success? To those thoroughly interested in their business it might be thought perfectly unnecessary to refer them to a weekly or monthly Calendar for the purpose of refreshing their memories as to the necessity of performing certain operations upon those subjects which are continually beneath their notice, and the objects of their diligent attention and culture; but the probability is, that to persons of this class they are likely to render the most efficient aid, by keeping thoroughly alive the conviction that excellence is not to be attained but by the most unremitting application. I almost feel I ought to apologise for offering such very desultory remarks as the foregoing, but such and similar ideas have often forced themselves upon me while looking over these "Floral Operations for the Month;" and it is very pleasing to find this portion of the Cabinet considerably more extended than in former years.

I do not of course pretend to intimate that the whole of the operations mentioned in these "Calendars" as requiring prompt attention, must be performed by every one who reads them. It may be not one of the articles specified may come within the sphere of an individual's operations, or that his mode of performing it may be entirely different from the plan that is recommended; but they will unquestionably have the effect of arousing his attention to those things which really do concern him. It has been already intimated that a very important use of "Calendars" is to keep alive the conviction that excellence is only to be attained by the most diligent application, and since every person engaged in the culture of fruits, flowers, and plants is desirous of excelling, and since there is probably no branch of art in which the attainment of the highest excellence is so clearly the result of well-directed and diligent effort, it may be affirmed, without any hesitation, that every individual so engaged will avail themselves of every means from which even the remotest hint may be gathered, which may assist them to the attainment of their very praiseworthy object.

FANCY PELARGONIUMS.

In no tribe of plants has the intelligence and perseverance of the florist been more amply rewarded than by the production of the splendid kinds of Pelargoniums which now comprise the collections displayed at our floral exhibitions. In fact, so perfect have the flowers become, and so numerous the kinds, that many persons think the point can be carried no further. However far these opinions may be true, it is a pleasing relief to such parties to find some zealous florists are aiming in a new direction, by endeavouring to multiply the varieties of what are now popularly termed "fancies." The production of a singularly beautiful kind, named Anais, and one or two other sorts, within the last year or two, incited in no small degree the desire for experiment. To promote this most pleasing object, it is with much gratification we publish, from the *Gardeners' Chronicle*, the following very interesting communication, written by Mr. Gordon, of the Horticultural Society's garden, who is one of the few experienced gardeners now acquainted with the properties of the various Cape and other Pelargoniums which have at this time, for the most part, grown out of cultivation.

Some of the suggestions stated are valuable, and deserve particular attention.

"Now that so many persons," says Mr. Gordon, "are turning their attention to the cultivation and improvement of Cape Pelargoniums, some information on what already has been, and still may be done, in the way of creating new varieties, or of improving those we possess, may prove acceptable to the amateur, particularly as all those fine hybrids obtained five-and-twenty years ago by the late Mr. Sweet and others, and figured in his beautiful 'Geraniaceæ,' have nearly or quite disappeared from collections. Many even of the original species then cultivated have again to be procured from their wild stations, more especially the tuberous kinds.

"It may not, however, be advisable to return altogether to the wild forms for stock; it would be better to improve, in some instances, the varieties we possess, particularly the fancy kinds (Queen Victoria, Anais, &c.), by fresh crossing them with such original kinds as fulgidum, ignescens, and sanguineum, either of which would produce brilliancy of colour. Others might be made the parents of a race of yellows, which would be quite a new feature; and this is not impossible, for Mr. Sweet mentions that the late Mr. Colvill at one time had a magnificent Cape species, with large panicles of golden-yellow flowers; but the plant was thrown down from a shelf by a cat when in full flower, and soon after perished. Now, if the yellow-flowered Hoareas and Dimacrias, particularly Dimacria rumicifolia, a Cape species, with beautiful deep yellow blossoms, were crossed with such species as formosissimum and elegans, both having rather large round whitish flowers, no doubt we should soon obtain a yellow, the flowers of which would increase in size, shape, and intensity of colour as they passed through successive generations. Sweet obtained crosses of various kinds between Dimacrias, Hoareas, Campylea, Phymatanthus, and the true Pelargoniums, as I shall notice further on; in fact, there is no real generic distinction amongst Hoarea, Dimacria, Campylia, Phymatanthus, and Pelargonium. Hoareas cross freely with Pelargoniums and Dimacrias, and as Hoarea corydaliflora, carinata, and others, have yellow flowers, there is no reason to doubt that, with perseverance and attention to the proper blending of colours, a Pelargonium with large yellow flowers may be obtained.

"If, therefore, growers would only turn their attention to the subject in a judicious and proper manner, it will amply repay them. Florists have not hitherto availed themselves of the help they might draw from the colours belonging to the half-shrubby and tuberous kinds, their aim having been directed to size and form rather than to brilliancy of colour and to variety.

"If we only look back to the kinds which first produced the present beautiful florist varieties, cucullatum, Barringtonii, fulgidum, &c.—kinds with small flowers and very narrow petals—and contrast them with those now in cultivation, we may imagine what is still to be done in improving the present Cape kinds of Pelargoniums, particularly as regards colour and new forms. When the beautiful tricolor Phymatanthus and the elegant Campylias are combined, not only with each other, but with Pelargoniums, we shall have some very handsome offspring. P. campyliæflorum is a beautiful cross, obtained by Sweet, between P. particeps and Campylia cana, and is, as nearly as possible, intermediate between the two kinds. See, again, what beautiful productions may be had by crossing such kinds as Pelargonium reniforme, cortusæfolium, echinatum, armatum, crassicaule, and sæpeflorens, with fulgidum, ardens, ignescens, and sanguineum, all of which mix freely, with ordinary care: Sweet obtained many beautiful kinds in this way. Observe, too, what a curious race may be formed through Pelargonium schizopetalum, a Cape species, the petals of which are finely divided up to their base, the upper ones being yellowish-green, and the lower ones brownish-purple; it no doubt would cross freely with P. lobatum, ardens, or sanguineum. Sweet's Pelargonium vespertinum is a cross between that very distinct and singular kind P. gibbosum and P. sæpeflorens, and what is rather singular, this cross, as well as many obtained through the reniform kinds, is more robust than either of its parents.

"There seems nothing to prevent our having double flowers, for Sweet figured two kinds in the Supplement to his 'Geraniaceæ' (Nos. 81 and 86), with all their flowers semi-double, and supposed to be a cross (both from the same parents, but raised by different persons,) between P. Barringtonii and capitata, both Cape species; it is a very singular kind, with the flowers rather crowded, like capitatum, and all the stamens changing into small petals. Finally, it may be possible to obtain a cross with the common scarlet; P. glossularioides, acetosum, pinguifolium, or some nearly-allied species, might be made to cross with that kind known in gardens under the name of 'lucia-rosea,'* a kind having the foliage and habit of the common scarlet, but with beautiful deep rose-coloured flowers and round broad petals. Or the well-known Tom Thumb might be tried with P. sanguineum or fulgidum, two kinds remarkable for their willingness to cross with all others, whether they belong to the sections Dimacria, Hoarea, Campylia, or Phymatanthus (Campylia laciniata is a cross between Campylia holosericea and Pelargonium sanguineum), or any of the true Pelargoniums, particularly those with divided leaves, like P. quercifolium, dianthiflorum, radula, lobatum, triste, multiradiatum, quinquevulnerum, &c.

"It must, however, be observed that all first crosses, or mules, do not readily breed with each other till their natural habits have been broken by culture, or by fresh crossing with an original kind; they will, however, readily mix with any one belonging to the same section. But when a mule from two different sections is obtained, it will seldom produce seed, and if ever it does it must be fertilised with the pollen of one of its parents, for it rarely has pollen of its own. When a hybrid plant will not produce perfect seeds, it most probably arises rather from some of its organs being monstrous than from their being imperfect; and this may be easily accounted for, because when true species produce natural monstrosities, the monstrous parts become sterile, if perpetuated. There is, however, sometimes great natural affinity between some particular species and all others. Sometimes a particular kind will form what may be termed an amalgam, or, in other words, will break the line of demarcation amongst the species, by its willingness to cross with all others. Calceolarias are an obvious example of this, shrubby and herbaceous kinds having combined, through C. purpurea and Fothergillii in the first instance, both of which were herbaceous.

"It should also be understood, when the operation of crossing is attempted, that not only the pollen of the kind intended for the male parent must be introduced at the proper time, but also that the natural pollen must be kept away, not only at that precise time, but generally for a considerable time afterwards. Moreover, it is to be observed that, in hybridizing, every blossom on the plant should be set, or else those not required should be removed; otherwise they rob the mules, and cause them to become imperfect and fall off. In breeding hybrids, if possible breed many families, and occasionally cross the one with the other; on no account breed in and in. In this manner very interesting races may be produced, choosing at all times the most improved and perfect from your seedlings, and rejecting all others afterwards; for the nearer we approach perfection the more difficult becomes selection, and the greater the danger of retrograding."

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* Lucia-rosea seems to be the same as Sweet's Ciconium cerinum.

FLORAL OPERATIONS FOR THE MONTH

ALTHOUGH the more active duties which spring, and summer, and autumn entail on the culturist are for a time somewhat suspended in certain operations, yet there are numerous duties peculiar to the winter that are equally important, and which are continually demanding consideration and care. Up to the present time the autumnal weather has been particularly fine, and all out-door operations could be uniformly proceeded with, but a change may be soon expected to occur. The general varying weather of January requires a floriculturist to be on the alert, both as to open air and in-door attention.

IN THE FLOWER GARDEN.

If the weather is severe, be careful to afford sufficient protection to all tender things, and on all favourable occasions remove such coverings as can conveniently be done, in order to dispel the damp air. See that all newly planted shrubs remain secure, so that they are not loosened by the wind. During hard frosts remember that all beds on lawns requiring raising with soil should be done at once, to avoid injuring the grass by wheeling. If any heads of tender Standard and Climbing Roses are still unprotected, they ought at once to be secured. As we have often recommended, this is best done by tying a covering of furze over them; it is better than straw, because it admits sufficient air to benefit the plant. Continue to collect, during the frosty weather, all kinds of soils and manures that are wanted, turfs to rot into turfy loam, sand, clean loam, peat, horse and sheep droppings, and leaves to rot, if not done already.

Amongst florists' flowers recollect that *Auriculas* and *Polyanthuses* must, in fine weather, have plenty of air, and require no water while there is the least moisture in the compost they are growing in; they must be cleansed from dead leaves, and not allowed to be quite dry, but moisture be sparingly given; they are also better when kept from freezing, not that they are tender, but they always bloom the worse for a decided check, and as the fibres of the roots are next to the pot they are reached easily. *Carnations* and *Picotees*, wintered in pots, are impatient of wet and confinement, therefore they cannot have too much air or too little wet; the frames they are kept in should be impervious to rain, and the bottom of the frame should be paved or cemented, and sufficiently sloping to let the wet run out at once. The lights should be off every mild day, and closed from frost and rain.

Tulips should be very carefully kept from frost, the soil they are in should not be even allowed to crust on the top if it can be avoided; if the earth be frozen down to the bulb, the bloom will assuredly be less perfect than if it were not frozen. *Pinks* and *Heartsease* in beds may be preserved from hard frost by covering with litter of any kind rather loosely, but not enough to deprive them of light and air. *Hyacinths* in beds or borders should be covered with litter, or occasionally with mats. *Ranunculuses* and *Anemones* that were autumn planted should also be protected from frost by similar means. Be careful to secure the plants firm around the stems.

IN THE FORCING FRAME.

At the end of the month sow seeds of the tender annuals, as Cockscomb, Amaranthus, &c., to have them fine specimens for the greenhouse, &c., in summer; and Ten-week Stocks, Russian and Prussian Stocks, &c., to bloom early, should be sown in pots, or be sown upon a slight hot-bed; also some other of the half-tender kinds, to prepare them strong for early summer blooming.

The Jacobeæ and Guernsey Amaryllises, with others of the genus, should be re-potted; also to have a few early blooming plants of Achimenes, Gloxinias, Gesnerias, &c., they should be started, and when beginning to push separate and pot them singly.

Cuttings of Salvias, Fuchsias, Heliotropes, Geraniums, Anagallis, Hemimeris, Lotus, Bouvardia, &c., desired for planting out in borders or beds during spring and summer, should be struck in moist heat at the end of the month, in order to get the plants tolerably strong by May, the season of planting out. Lobelias in pots should now be pushed, in order to divide and pot singly next month. Dahlia seed is best retained in the head as grown, spread singly where they will not be liable to mould, and be kept in a dry situation; the seeds will thus be kept plump. Where great increase of plants is required for next season, the roots should now be potted or partly plunged into a little old tan in the stove, or a frame, to forward them for planting out in May. As shoots push, take them off when four or five inches long, and strike them in moist heat. Sow seed at the end of month.

Mignonette, to bloom early in boxes or pots, or to turn out in the open borders, should now be sown. Protect the stems of tender plants with furze branches, dry leaves, fern, &c. Sow in pans seeds of Rhododendrons, Azaleas, Ericas, &c., that plants will be fit to plant off in May.

IN THE COLD FRAME AND GREENHOUSE.

In this department, mind that if Camellias are not regularly supplied with soft, not too cold, water, the buds will drop; if too much, frequently that will cause them to drop too. Never give heat to Heaths as long as the frost can be kept out by coverings or otherwise. A few degrees of frost will never injure Cape Heaths, whereas fires are their ruin. Let the air blow upon them on all favourable occasions. Nothing destroys the constitution of these plants so much as close and damp houses. Should any choice varieties of Azalea indica be required for the purpose of propagation by cuttings, they may be transferred to a temperature sufficiently high to excite an early growth. Cuttings of these will be found to root with much greater facility early in the season than at a later period, besides it is of considerable advantage to have young plants strong and well established by the approach of the succeeding winter. Gladioli, Alstræmeria, Lilium, &c., grown in pots at the end of the month, should be repotted. When the weather is damp or foggy do not give air, only let a dry air be admitted. If any of the Oranges, Lemons, &c., have naked or irregular heads, towards the end of the month, if fine mild weather occur, begin to reclaim them to some uniformity by shortening the branches; by this attention they will break out new shoots upon the old wood, and form a regular head. It is the practice of many persons to prune in most exotic plants at the time of repotting, disrooting, &c., that is injurious, the plant sustaining a double loss at once; prune some time before repotting, vigorous young wood is obtained, after which repot for fine bloom. Tender and small kinds of plants should frequently be examined to have the surface of soil loosened, decayed leaves taken away, or if a portion of a branch be decaying cut it off immediately, or the injury may extend to the entire plant and destroy it.

Chrysanthemums having now quite ceased blooming, the plants must be placed in a cool pit where they can be protected from severe frost, and have the tops cut off. If seed be desired such plants must not be headed down, and they must be kept in a dry and warm place in the greenhouse to ripen.

IN THE STOVE.

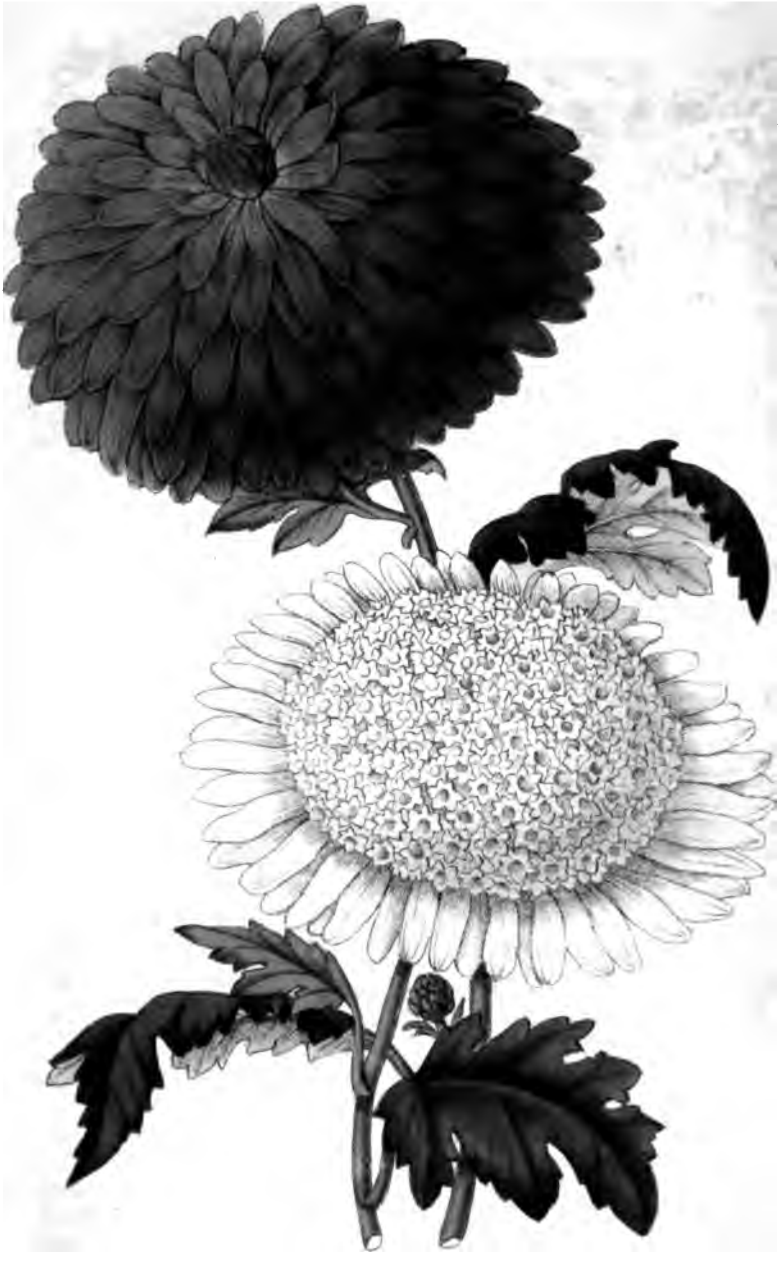
All kinds of plants required here for ornament, and which have been duly prepared by previous culture, should be introduced in succession, giving ample supplies of water and frequent syringing over head. If any of the forced plants be attacked with the green fly, a syringe with diluted tobacco-water will destroy them. If the leaves appear bit, and turn brown (the effect of damage by red spider), a syringe of soap-suds at the under side of the leaves is effectual to destroy them. The glutinous substance remaining not only kills those it is applied to, but prevents others returning there. The plants best adapted for forcing are various kinds of Roses, Persian Lilacs, Azaleas, Acacia armata, Neriums, Gardenias, Rhodora, Heliotropes, Correas, Deutzias, Mezereums, Coronillas, Cytissus, Ribes, Mignonette, Cinerarias, Sweet Violets, Lily of the Valley, Tulips, Cyclamens; and the old Eranthemum pulchellum with its fine blue flowers, Justicia speciosa, Gesneriæ Zebrina, Justicia pulcherrima, and Apphellandria cristata, are fine winter ornamental blooming plants. All pots or boxes containing bulbous-rooted flowering plants, as Hyacinths, Narcissus, Persian Irises, Crocusses, &c., should occasionally be introduced, so as to have a succession of bloom. Many persons who take a delight in growing showy Hyacinths or other bulbous plants for adorning a room or window, &c. in winter or early in spring, have been frequently disappointed by the abortiveness of some and weakness of others. This principally arises from the inability of the plant to develop itself with a rapidity equal to the quantity of moisture it imbibes, on account of its upper surface being acted upon too immediately by the atmosphere, &c.; hence arises the necessity of covering the bulb. That such is a fact is evidenced by the admirable and certain success of nearly every bulb, especially Hyacinths, that is covered with about six inches of old spent bark. This or some similar light material should always be used. Even bulbs intended to bloom in glasses we prefer starting in the old bark, and then transferring them to the glasses when the shoots are about two inches long. Where such covering is not adopted, it is of advantage to have the pots or glasses kept in a dark place till the shoots are so long. Cactus plants that have been kept in the greenhouse should occasionally be brought into the stove for flowering, which gives a succession.

ON THE LEAVES OF PELARGONIUMS BEING AFFECTED BY SPOTS.

BY E. H. CORNWALL.

A CONSTANT reader requests the obliging information of some correspondent as to what means he is to take in order to prevent the leaves of Pelargoniums from being affected with numerous blotches of a brown colour. His plants have thus suffered for a long time, and they are getting worse. They have been fumigated with tobacco smoke several times, but no improvement resulted from the operation. They were kept very dry for a period, and afterwards quite moist; but still unsuccessful. Any information of a remedy, and as early as possible, will be esteemed a great favour.

[Our plants have escaped the pest our correspondent deplores. After the plants are housed in autumn, we water in the morning, with a view to have the house well dried before it is closed in the evening, by a free current of air being allowed to pass through it. If the air be frosty, then a slight fire is applied to dry it before evening. We keep the soil just moist from November to the middle of February, then increase the quantity. Our aim is to keep the soil and the atmosphere of the house as near equal in moisture as possible. If the soil be very dry and the atmosphere very moist, mildew is almost certain to attack sundry kinds of plants, especially fleshy stems and leaves, and the footstalks of the leaves often rot, close to the spreading portion of the leaf; sometimes, too, if the stalk escape, a portion of the leaf decays. To arrest this disaster, dust the plants over and under the leaves with common sulphur, but admit no fire into the house for a few days. After applying it, in a week or so, shake the plants and sweep out the sulphur. The proper attention in watering, and due admission of air, will render this application unnecessary. Perhaps the brown blotches on the leaves, such as are on those our correspondent sent us, may result from the mildew spot where it first originates, but soon after is arrested by some casual remedy in treatment of the house, &c. Not having practically to contend with the adversary, we are not in a position to do more at present than state probabilities. If any of our readers can assist our friend, we very respectfully solicit their compliance with the request he has made.—CONDUCTOR.]



Nancy de Sermet. King of the Crimsons

FLORICULTURAL CABINET

FEBRUARY, 1848.

ILLUSTRATIONS.

CHRYSANTHEMUM INDICUM, VARIETIES.

NANCY DE SERMET AND KING OF THE CRIMSONS.

IT is several years since our Magazine was embellished with a figure of this very charming and valuable tribe of flowers. We have not been prevented for want of new handsome varieties, as since that time there has annually been a great improvement, both in the attainment of a more perfect form, and in the greater distinction of colours. Nor have we hesitated because we do not admire the flowers; on the contrary, we have a very strong attachment to them, and consider that the assemblage of beauty, in variety of form and in exquisite colours, is not to be surpassed in their season of bloom, as is exemplified in our enchanting, beauteous decorations, both out doors and in doors.

The two varieties we now figure are very strikingly distinctive, and ought to be in every select collection.

The management of the Chrysanthemum is now well known. It is the aim of those who grow for exhibition at the Chrysanthemum shows to grow the flowers as large as possible; and in order to do so, thin all away to a very few, leaving only one each to the three or four leading shoots, and to grow the plants as vigorous as possible. This is easily accomplished by a very rich loamy soil, frequent repotting, application of manure water, &c. By such treatment we have seen what would be termed monsters, in comparison with the generally cultivated collections. We do not so much admire the extravagant sized plants, as the compact lesser sized ones, in a profusion of bloom. To realize this object, a respected correspondent gave us the following particulars relative to the mode of treatment he pursued with the greatest success. He states as follows:—

"The latter end of March I select the strongest suckers from the old plants, and plant one in a 48-sized pot, using the richest soil, consisting of equal parts of loam, bog, well-rotted stable manure, and leaf mould. When I have put off as many as I have occasion for, I set them in a cold frame, and keep them close for a fortnight or three weeks, by which time most of them are well established in the pots; they are nursed by degrees to the open air; they are then taken out and placed in an open situation, until the pots are well filled with roots, which will be by the middle, or from that to the end of May; they are then shifted into the pots in which I intend them to flower, some in 24's and some in 16's, according to the strength of the kinds, using the same kind of compost for them, and then plunging the pots up to their rims in a south border, about two feet six inches apart each way, which allows plenty of room for the plants to grow without drawing each other, and for performing the operations of tying, watering, &c., which they from time to time require. In this situation the pots soon become filled with roots, and protruding through the bottoms of the pots the plants luxuriate with very great vigour. In order to keep the plants snug and bushy, continual attention to stopping the shoots is necessary, commencing with the plants when they are four or five inches high, and subsequently as often as they have made four or five joints, till the middle of July, when I leave off stopping, and let them run up for blooms. As soon as the flower buds are well formed, which with me is usually about the last week, or last but one, in September, I tie up the plants to neat sticks, and range them in the way I wish them to flower. I have placed sticks around the sides of the pots, and so tied the shoots as to have flowers and foliage quite down to the rim of the pot, but though the plants so arranged have a very neat and pretty appearance, they do not flower either so abundantly or fine as when stems are trained upright. By the middle of October most of the sorts are showing colour, when they are taken up, giving them a twist round to separate the roots that have protruded underneath, and placed in the greenhouse. The late blooming sorts are left out for a week or two, or until there is an apparent danger of injury by frost. Although when taken out of the ground the largest portion of their roots are outside the pots, they seem not to suffer the least check, but when placed in the greenhouse go on expanding their flowers as though they had never been disturbed. Due attention is constantly paid to watering with soft water, liquid manure, &c."

NOTES ON NEW OR RARE PLANTS.

ACACIA LEPTONEURA—SLENDER-NERVED.

Leguminosæ. Polygamia Polyandria.

A native of the Swan River colony. It very strongly recommends itself by its graceful slender branches, which are loaded with rich deep orange-yellow coloured round heads of flowers. The plant grows from four to six feet high, with wavy slender branches. The leaves are about three inches long, awl-shaped. It forms a very neat, handsome ornament for the greenhouse or conservatory, and deserves to be in every one. Although the plant grows in such situations to the height above stated, it is easily kept, by pinching the leads, as a low neat shrub, and blooms profusely during the spring and early summer. (Figured in *Bot. Mag.*, 4350.)

CEROPEGIA CUMINGHAMIA—MR. CUMING'S.

Asclepiadea. Pentandria Digynia.

Messrs. Veitch received this neat and interesting species from Java. It is a climbing and twining plant, with reddish stems. The flowers are numerously produced, in cymes of eight to ten in each. A single flower is about two inches long; the tube contracted in the middle, cream-coloured; the limb, &c., is of a brownish-orange, rose and purple. It is very interesting and handsome. It well deserves to be in every hothouse collection. (Figured in *Bot. Mag.*, 4349.)

CHOROZEMA FLAVA—PALE-YELLOW CHOROZEMA.

Leguminosæ. Decandria Monogynia.

This is one of the most pleasing of all the species in this beautiful tribe. The wings of the flowers are of a pale yellow colour, and the keel a clear white. Being, too, apparently a very profuse bloomer, the plant presents a remarkably light and elegant appearance. It is a neat evergreen shrubby plant, with light green foliage. We saw it in the Royal Gardens at Kew.

GESNERIA PARDINA—LEOPARD-SPOTTED.

Sent from the Organ Mountains to the Royal Gardens of Kew. The habit of the plant resembles G. aggregata. The stem rises half-a-yard high, erect. The flowers are produced singly, from the axil of a leaf; tube a little over an inch long, orange-red outside, with darker spots; inside yellow, with a five-parted limb (mouth) of rosy-red. (Figured in *Bot. Mag.*, 4348.)

HOYA CINNAMOMIFOLIA—CINNAMON-LEAVED.

Asclepideæ. Pentandria Digynia.

Messrs. Veitch received this new and handsome species from Java, and in the stove at their nursery it bloomed the last summer. It is a twining plant, with large thick foliage. The flowers are borne in a close half-globe shaped head, similar to the well-known H. carnosa. The corolla is a pale yellow-green colour, which surrounds the crown, of a rich deep purple blood colour. The contrast is very striking. It is a very interesting plant, well deserving to be in every hothouse. (Figured in *Bot. Mag.*, 4347.)

HYPOCYRTA GLABRA—SHINING-LEAVED.

Gesneriaceæ. Didynamia Angiospermia.

A stove gesneriaceous plant, supposed to have been sent from South America. It grows erect, not branching, about nine inches high; succulent. The flowers are produced at the axils of the leaves, two or three together. The tube portion is very bulging, of a rich scarlet colour, terminated with a small five-parted limb (mouth) of orange-yellow. It blooms profusely, and is very pretty. (Figured in *Bot. Mag.*, 4346.)

IXORA JAVANICA—JAVA IXORA.

Mr. Lobb, the collector of plants for Messrs. Veitch, of Exeter, discovered this fine species in the woods in Java, and a blooming specimen was exhibited at the Chiswick Show last July. The flowers are produced in terminal corymbs, not quite as large as the Ixora coccinea usually does, of a deep orange-vermillion colour. It well merits a place in every stove collection. (Figured in *Pax. Mag. Bot.*)

LAGERSTRÆMIA ELEGANS—THE ELEGANT.

It is a native of the East Indies, and, like the L. indica, is a beautiful flowering stove shrubby plant. The flowers are produced in fine spreading panicled heads, of a deep rich rose colour, intermingled with yellow. A single flower is about an inch across. It is highly deserving a place in every stove. (Figured in *Pax. Mag. Bot.*)

PHLOX LEOPOLDIANA—KING LEOPOLD'S LYCHNIDEA.

Phlox Drummondi is universally admired, and from the original species many distinct varieties have been raised. The present one was raised in Belgium, and is particularly beautiful. The general colour is a bright rosy-crimson, eye a rich deep crimson, and the throat white. The contrast is striking. We shall have plants of it for the coming season. It well merits cultivation, either in the greenhouse or flower-garden. (Figured in *Pax. Mag. Bot.*

SOLANDRA LÆVIS—THE SMOOTH-LEAVED.

Messrs. Lucombe and Pince, of Exeter, recently received this noble species from the Continent. No indication was given of its native country. It is a hothouse shrub, growing two feet high, with long trailing branches. The leaves are about four inches long, glossy, and thick. The noble flowers are nearly a foot long, terminal, funnel-shaped, of a greenish cream colour, with a pure white five-parted limb (mouth), five inches across. The flowers are beautiful, very fragrant, and such very large flowers, borne upon so small a plant, renders it especially ornamental. It would be very suitable to train round a pillar, wire frame, or trellis. (Figured in *Bot. Mag.*, 4345.)

THIBAUDIA MICROPHYLLA—THE SMALL-LEAVED.

Messrs. Veitch received this new evergreen shrub from their collector, who discovered it in Peru, at an elevation, it is said, of twelve thousand feet. The leaves very much resemble those of a box-tree; they are thick and leathery. The flowers are produced solitary, from the axils of the leaves; the footstalk is so long as to exhibit the entire of the flower beyond the foliage. The flowers are produced numerously towards the ends of the shoots. A single blossom is about three-quarters of an inch long, cone-shaped, and are stated to be a fine deep scarlet colour. It is a very neat bushy plant, and when in bloom must be particularly handsome. If it should not prove even hardy, it will be a charming ornament to the greenhouse.

NEW PLANTS NOTICED IN NURSERIES, &C.

At the Royal Gardens of Kew we recently saw very beautiful specimens in bloom of the following :—

Begonia zebrina.—Flowers white with a yellow centre; very delicate and handsome.

Begonia ramentacea.—White inside with a yellow centre, outside rose colour; very pretty.

Ruellia montana.—Tube four inches long, with the five-parted limb two inches across; a beautiful blue-purple colour. Handsome.

Heterocentrum Mexicanum.—One of the Melastoma-like plants. The flowers are numerously produced in large branching panicled heads. A single flower is an inch and a half across; pure white. Very pretty.

Tecoma jasminoides.—This very beautiful greenhouse climber was in fine bloom. Its large Bignonia-formed flowers, of a pure white with very distinct rich crimson spot, produced a striking effect. It ought to be in every greenhouse; and being cheap is an additional recommendation. It does for a pillar, trellis or wire frame.

Trachymene linearis.—Flowers, in heads like the Wild Milfoil, white; and, blooming abundantly, is very ornamental.

Pronaya elegans.—A Pittospora-like blooming plant. The flowers are produced in terminal heads, a pretty blue-lilac colour. It is a climber.

Bignonia grandiflora.—A bushy plant, two and a half feet high, with eight fine heads of its orange-red, trumpet-shaped flowers. Very ornamental. Ought to be in every greenhouse.

Physianthus auricomes.—Flowers white; very like Stephanotus floribunda.

Russelia sarmentosa.—Flowers in long spikes, in whorls, a bright red. Very pretty.

Ruellia Purdiana.—The flowers are of a brilliant rosy-scarlet colour. It is very neat and pretty.

Agalmyla stamina.—Messrs. Veitch received it from Java. It is of the habit of Æschynanthus; leaves six inches long; flowers borne in large clusters; each blossom two inches long, of a brilliant scarlet; the stamens extend longer, and are of a rich purple colour. A fine stove plant.

Gloriosa Leopoldina.—It appears to be a variety of the G. superba, but its flowers are entirely of one colour, that is yellow. It is a pretty companion for the other handsome flower. At the Chiswick Nursery.

Salvia (new species).—In Messrs. Knight and Perry's Nursery it has bloomed abundantly the last autumn. The plant grows about three to four feet high; leaves not large, having numerous laterals covered with racemes of deep violet-blue flowers. It is a very useful plant for the flower beds.

Petunia (new species).—This has been obtained by Messrs. Veitch from Peru, under the name of Nolana species. It is thought, however, to be entirely different from either. It is of a creeping habit. The flowers are nearly white, with a rich crimson throat. Very handsome.

NOTES ON FLORISTS' FLOWERS.

GERANIUMS.

THE following are our notes on some of the best seedlings produced last season at the London exhibitions.

AVENGER (Thurtell).—Delicate blush, with deeper veins; upper petals with a large dark spot, surrounded by a narrow margin of ruby; large size, and of excellent form.

BRILLIANT (Topping).—Bright reddish-scarlet throughout the flower; upper petals with a small dark spot; large size; the petals are rather thin, but well rounded, and open out flat.

CAVALIER (Beck).—Rich red; upper petals with a dark cloud, laced with reddish-scarlet; moderate size and very good form.

CENTURION (Beck).—Rose, lighter to the centre, with a dark spot on each; upper petals with a large irregular dark spot; medium size; compact, good shape, and very handsome.

CHAMPION OF DEVON (Topping).—Rosy-blush, slightly veined; upper petals with a dark veined spot, surrounded by rosy-pink. An immense large flower, rather reflexed and loose when fully opened.

CHRISTABEL (Hoyle).—Ruby-pink, with a distinct pure white centre; upper petals with a dark cloud, shading off into a bright red, and margined with pink; large size, smooth, and excellent form.

CRUENTA (Beck).—Red, lighter to the centre; upper petals with a large very dark blotch, and edged with bright red; medium size; stout, smooth substance, and compact, fine form.

CRUSADER (Hoyle).—Bright rich red; upper petals with a very dark blotch; large size, excellent shape; a splendid flower.

DISTINCTUS (Miller).—Veined rosy-lilac, with a dark spot in each; upper petals with a large dark blotch and belt of lilac; large size; good, even form.

DUKE OF ROTHSAY (Hoyle).—Bright light red; upper petals with a large very dark spot, surrounded by rosy-scarlet; large size; a fine flower, but rather uneven.

ECLIPSE (Hoyle).—Brilliant deep red; upper petals with a deep blotch; medium size, good form.

FAVONIUS (Beck).—Rose, with a crimson spot in each, and clear white centre; upper petals with a large deep crimson spot and belt of rose; size large; good form, but not very compact.

FLAMINGO (Hoyle).—Ruby-red; upper petals with a very dark blotch, and margin of reddish-scarlet; large size, good form, and very showy.

GULIELMA (Beck).—Rosy-purple, with a spot of crimson in each, and white centre; upper petals with a large veined blotch; large size, smooth, and good form.

HONORA (Beck).—Blush; upper petals dark crimson, with a narrow blush margin; medium size, round, compact, and good form.

PRESIDENT (Hoyle).—Light red; upper petals with a veined blotch; large size, good form.

PRETENDER (Thurtell).—Veined blush-white; upper petals with a dark blotch, surrounded by deep purple; large size, excellent form.

ROSY MODEL (Miller).—Rose, white centre; upper petals with a dark veined cloud and crimson band; size medium; compact and good form.

Salamander (Gaines).—Bright reddish-scarlet throughout the flower; upper petals with a small dark veined spot; large size; good-shaped showy flower, but inclined to be uneven on the edges.

Superlative (Hoyle).—Pinky-flesh, with white centre; upper petals with a large deep crimson blotch, and narrow even margin of rose; large size; round, smooth, and very even form; a beautiful flower.

CULTURE OF THE DAHLIA.

BY MR. CHARLES TURNER, CHALVEY, SLOUGH.

The following directions are offered as the result of considerable experience, attended with uniform success, from 1834 to the present time, during which period I have grown the "King of Autumn" in four different localities, and in as many different soils. The ground I occupy at present differs materially in its nature, and consists of old black vegetable garden mould, stiff loam, and sandy or peaty loam.

The finest flowers are produced with less labour and attention on the latter, to which, of course, I give the preference; and I would recommend to those beginning the culture of the Dahlia, or others selecting a new piece of ground, to choose a moist, light part of the soil, for flowers that produce green, hard centres, and likewise a convenient situation for giving them plenty of water, as their rapid growth causes them to produce flowers with perfect centres; when those flowers that generally come thin after their first blossoms should have an open situation and heavy soil, in order to produce slow growth. The Marquis of Aylesbury, Hudson's Princess Royal, &c., are suitable to the former; Lady St. Maur, Beauty of Sussex, and such flowers, to the latter situation.

Planting.—The ground having been well turned, or thrown up in ridges during the winter, levelled when in a dry state late in March, or early in April, and well dug previous to planting, I proceed to mark the distance, which should be six feet from row to row, and five feet six inches in the rows. This will not be found too much, as large flowers can never be produced if the plants once become drawn.

A few spits of light rich soil, well mixed in the spot where the plants are about to be placed, will cause them to take hold, and be established, in much less time; and, if the ground is poor, the same quantity of rotten manure, mixed in underneath, will also be of great benefit.

The last week in May, or the first week in June, is the proper time to commence planting. Select those plants that are short, stout, and fast swelling; and avoid those that have stood too long in the pots, and have become stunted in the points and hard in the leg. If such cannot be avoided, it will be a saving of time to re-pot, and place them in a brisk heat; I would recommend, also, that the young plants should be re-potted, as soon as received from the nursery, into four-inch pots, and placed in a cold frame, free from slugs, and to be kept growing, though slowly, giving all the air possible in fine weather, so that the stems of the plants may be of a dark green colour, short jointed, and of a healthy appearance. Green fly should not be allowed to exist amongst them. By attending to these simple means, it is easy to lay the foundation of future success, which cannot be obtained with bad plants.

Stake them at once with one large stake, to be permanent, and secure the plant with a strong piece of bass, sufficiently loose to allow the stem to swell. Add two small stakes at right-angles, to which the plant must also be secured; this will keep it in a firm position during the worst weather. Add large stakes as the plant advances, and keep the side branches secured. In this particular there is generally some neglect; by deferring the tying until it can be done all at once, an unexpected high wind may strip the plant of half its branches.

I must strongly impress on those who wish to obtain fine large flowers the importance of tying the branches "out," not up in a bunch like a wheatsheaf, which is too often the case; as it is essential that the sun and air should circulate freely through the plant, as well as around it.

THINNING.—Under this head no definite rule can be laid down. Never allow the plant to become full of small branches, and then removed at once; all superfluous shoots should be cut away as the plant progresses. It is also injudicious to subject each variety to the same amount of thinning, for by such treatment as much injury will be done to some kinds as good to others. Those that are generally too large and coarse must be spared, when such varieties as require size only should be thinned considerably. As I before observed, no precise rule can be laid down, and nothing but close observation in this important part will make the operator perfect.

Nearly the same rules apply to disbudding. Those that it is necessary to reduce in size must be deferred until a later period, which will bring the flowers more compact, with smaller petals, and better general form.

SHADING OF BLOOMS.—Here the enthusiast often makes a sad mistake, by being too anxious, giving himself extra trouble, and at the same time spoiling the blooms he so much wishes to preserve, by shading them too long before they are wanted, shading out of character many of the light flowers, and making all tender, and less able to bear a journey, or exposure when put up for competition. It is requisite to shade some light flowers, and some of the yellows, earlier than others, in order to produce them clear and distinct; when, on the other hand, those with slight tips or marking must be deferred, otherwise the face of the bloom would be without its characteristic feature—indistinct blush, instead of the attractive tip or edge.

The time required for shading before a given day when the blooms are wanted, must, in a great measure, depend on the weather. Four or five days will be sufficient for an early show, but, as the season advances, extend the time; and secure the buds or young blooms likely to be good from friction against the neighbouring blooms and foliage, by tying them to stakes or parts of the plant.

There are many kinds of shades in use for protecting the blooms, of various degrees of merit. Those I prefer are made of tin, painted white. A spring in the ferule attached to the side of the shade fixes it at any height it may be required; the stalk of the bloom is then crossed, and firmly secured to the stake, leaving the bloom fixed under the centre of the shade.

Pots, inverted on what are termed tables, are desirable for some varieties. I do not prefer them for general use, one great disadvantage being the time occupied in fixing the bloom, being double that of the shades above described. Flowers with weak foot-stalks are best secured under pots. Avoid any contrivance that will not admit the air freely.

Those who have grown the Dahlia for exhibition will be fully alive to the importance of keeping down insects, more particularly the common enemy the earwig. Many plans are adopted for this purpose; the most common, and, perhaps, most effectual, being with small pots half filled with dry moss, placed on the stakes that support the plants, and bean-stalks placed about them, to which they retire. The most active vigilance is necessary, as they fly from plant to plant; but commence early to examine the plant, and keep them down as much as possible. The surface of the ground should frequently be moved; it will require to be forked up between the plants about five or six weeks after they have been planted. Cleanliness should be observed in every department, and at every stage of their growth, or success will be anything but certain.

WATERING.—From constant watering, the soil near the plant will become baked and hard. It will, therefore, be best to mulch it with partly decomposed manure; this should be done immediately after it has been forked over, as it will keep the roots nearest the surface moist.

Use soft water, if possible. If not naturally so, pump it, in the morning, into tubs or tanks, leaving it to the action of the sun and air, to be used in the evening. When the plants have become large, it will be necessary to give them considerable quantities at a time, instead of frequent waterings; but this, of course, will depend upon the state of the weather, soil, &c. On no account neglect giving them a slight sprinkling overhead, through a fine rose or syringe, in dry weather, after the sun has left them, as the dew following this operation will keep the plants in a wet state until the following morning, which will prove a preventative of the thrip, and keep the earwigs from eating the points of the young shoots, which they often do before any blooms appear. The colour and size of the foliage will also soon show the beneficial effects of this practice.

SELECTING BLOOMS FOR EXHIBITION.—This often puzzles the most experienced growers, the dark selfs being so much more numerous and superior in shape to the light flowers, that, in selecting twenty-four, one or two points often have to be sacrificed, either shape or contrast in colours. I recommend that as much diversity of colour should be introduced as possible, with due regard to shape and perfect centres. Much can be done by arrangement, yet we often see stands contain a whole row of flowers of great similarity. At all times place deep circular flowers at the four corners, and select quality before size. If a bloom is observed to be shaky behind, or inclined to open in the centre, when packing up your box, it may safely be concluded that it will not make one of the number required by the time it is wanted. Discard it at once, and look for the next best of the same sort.

If the blooms are intended to travel a long distance, provide plenty of young ones in addition.

Never unnecessarily handle the blooms. It should be remembered that all this painstaking has been to produce them in the highest state of perfection, to be looked at only; and the dead appearance, caused by rough usage, can never be removed.

FANCY DAHLIAS are becoming very popular, and deservedly so. The prejudice is fast wearing away that these parti-coloured flowers could never be produced of good shape. Every succeeding season has tended to remove this impression, and we have at length many kinds which would grace a stand of the ordinary varieties. I should recommend the same treatment for these as the other varieties. Perhaps they should not be grown quite so strong; and those known to be too long in the petal (the prevailing fault at present) should not be disbudded so early as the others; this will improve the outline of the flower, but reduce it in size, a point, however, of much less importance.

Fancy Dahlias, in a few years, will, no doubt, be as extensively cultivated as the ordinary varieties, being more showy in the borders, and, with improved shape, will be more attractive in stands.

RAISING SEEDLINGS is, perhaps, attended with more interest and pleasure than any other part of the culture of this beautiful flower. Daily watching the expansion and development of each promising bud is attended with no little excitement.

Much has been said and written respecting which sorts are best to save seed from. I will not attempt to instruct, further than give the system practised by me; which is, to remove all thin or otherwise inferior blossoms as they appear; for the fewer petals there are, the greater the quantity of seed, with little or no chance of its producing a good double flower. By this, it will be seen, much ultimate trouble will be saved. In small select collections, there will not be so much to do on this point; but in large collections there will be many varieties, from which it is not desirable to save seed. This accounts for the number of fine seedlings that have been produced by amateurs from small collections, when many who annually raise thousands do not produce a good one. It is worthy of remark that those seedlings that take the lead and bloom first, seldom, if ever, produce a flower worth preserving; these are from the finest seeds and thinnest blooms; they vegetate first, and keep ahead all through the season, and can easily be distinguished by their tall habit, without side branches; whereas the late, small plants, that require nursing to make them bloom before the frost arrives, generally produce the best flowers, as it is well known that very few of our best seedlings are ever shown the first season of their blooming. These are from the smallest seeds, and very double flowers.

Concluding Remarks.—I am an advocate for changing the stock of good old varieties. Growing them, year after year, in the same garden, without even partly changing the soil, produces the result which may be anticipated; the flowers degenerate, and a change becomes necessary.

Keeping the roots, and propagating from them, being so simple, and now so generally understood, it will be a waste of time and space to enlarge on this part here; but I recommend that pot plants should be preserved of those varieties as are known to rise badly from the ground, such as the Duchess of Richmond, Mrs. Shelly, and several others, which often decay during the winter.

In taking a retrospective view of the Dahlia fancy, it is pleasing to remark the gradual improvement of this autumnal favourite up to the present time. This improvement is annually progressing towards greater perfection, for of late years many of the finest varieties have been introduced, and it is notorious that an established fine seedling at the present time will command a higher price than at any previous period. To mark the progress of the Dahlia, the stand that obtained the 20*l.* prize for the best twenty-four blooms at the Cambridge Dahlia Show, 1840, contained only one variety that was shown in the first stand, of the same number of blooms, at the Metropolitan Exhibition, 1846, a brief period of six years. That variety was Springfield Rival, a flower of thirteen or fourteen years' standing. I need not mention that both stands were grown by myself. The former was considered to be the best that had been produced up to that time, and the latter was certainly the best twenty-four I had shown during 1846. I very well remember that, at Cambridge, Unique was what is termed the "bloom of the exhibition;" Penelope, Amato, Hope, Conservative, Maid of Bath, and many other flowers now out of date, were stars in that superior stand.

POLMAISE HEATING OF HORTICULTURAL STRUCTURES, &c.

The subject of heating by the so-called Polmaise system is again the subject of discussion in the horticultural newspapers, and therein strenuously debating the merits and demerits of the system, after it has had a trial of more than two years. The revival of the correspondence has been promoted by the circumstance of the Chelsea Botanic Garden being in the course of an entire renovation.

The improvements commenced in this garden are of the following description:—The hardy plants are to be re-arranged upon the grouping system; numbering is to be done away with, and each plant is to have its name affixed to it. This will, without doubt, prove a great boon to medical students, who have often little time to consult printed lists; besides, it will bring more readily under their notice many of those fine medicinal plants which this garden contains. A new range of span-roofed hothouses and greenhouses are to be built in the centre of the garden, and these are planned so as to have the fine old marble statue of Sir Hans Sloane in the centre of the range. A new entrance will be made in Swan-walk, at the east end of the range of houses, and a pond for water-plants is to be formed at the bottom of the garden, in connexion with the Thames, and which will be filled at every flood-tide. Mr. Fortune, who has been appointed curator, has put up a small Polmaise stove in one of the pits, by way of experiment, to determine the value of the apparatus, and to enable him to judge whether or no it would be desirable to adopt the plan for the new range; and in order to obtain information from persons who had practical evidence of the system, he solicited it through the medium of the *Gardeners' Chronicle*. Since that time, several communications have been forwarded to the editor of that paper. One from an excellent practical horticulturist, Mr. Ogle, gardener at Eridge Castle, near Tunbridge Wells, in Kent, contains a statement of facts, without any regard to whether these should accord with the views and opinions of those persons who approve or disapprove of the system. He states:—

"I am surprised to find no one has replied to Mr. Fortune's inquiries; it would therefore appear that few have an opportunity of doing so. As I have had this system at work for early forcing, perhaps my experience may be of some service. In the autumn of last year I was about making an alteration in the mode of heating a vinery which had previously been heated by flues, and determined, by permission of my kind and noble employer, to try Polmaise. The house was the centre one of three vineries, each forty feet wide. I was perfectly acquainted with the principles of this mode of heating, but there were a few of the details of construction which I did not understand, and which I pointed out to you. I therefore paid a visit to Nutfield, and was most kindly received by its then proprietor, with whom I spent two hours. It is not necessary to state what my opinions were as to what I saw, further than that, with the exception of the pines which had not long been there, the plants looked remarkably healthy and luxuriant. I drew my plans; and, that it might not be said that I departed from the correct principles, I forwarded them to Mr. Meek. He returned them with a very complimentary letter on the correctness of them, and at the same time entered very fully into what he had done and what he intended to do, and concluded with a request that I would correspond with him on the production and diffusion of heat. In November I commenced operations, and no necessary expense was spared to make it complete. The best materials were used, and the workmanship was of the best description. The size of the hot-air chamber and fire-place was seven feet by six feet; the walls surrounding the fire were fourteen-inch work, built of fire-brick and fire-clay. I had two plates which were cast with a rim, so as to work in a sand groove, to allow for contraction and expansion. Everything, indeed, was done to give the system a fair trial. I began to force on the 27th of January, and cut grapes the last week in June. I soon found the circulation of heated air was not so good as I could wish. I then made some alterations, which somewhat improved it, but I could never get it to work to my satisfaction. In a little time, when I came to have a brisk fire, the smoke got into the house, and upon examining the plates, I found one immediately over the fire very much warped and out of place. I altered this, but it was very soon again out of order, and I consider the plate will always be an insuperable bar to the adoption of this mode of heating, as it so frequently permits the escape of smoke and gaseous exhalations into the house. As regards moisture, the evaporating trough supplied me with it in abundance, and in which the vines appeared to luxuriate; but on its withdrawal, as the grapes approached maturity, the atmosphere of the house was very disagreeable and impure; the red spider also made its appearance, and spread rapidly, while the vines in the houses on each side have been entirely free from this pest to the present time. As to fuel, this house consumes more than it did when heated by flues by one-half. As far as regards early forcing, I do not believe this plan of heating will answer. When a moderate degree of heat is only required, the circulation of hot-air within the house is equal and regular; but when a temperature of 40° above that of the open air is required, the circulation of hot-air within the house is not equal and regular; the grapes in that part of the house most distant from the hot-air entrance being upwards of a fortnight later than the others will prove the correctness of my assertions. As regards the health of the vines and plants, up to the time I withdrew moisture, they were everything I could wish; I never saw anything look better, and so far I was pleased with this mode of heating, but in every other respect disappointed. It may do for small houses and pits, where a moderate degree of heat is required; but for early forcing, in large houses, I am convinced it will not answer, under its present arrangements, so well as other methods of heating. To conclude, I will briefly answer Mr. Fortune's queries, as far as I am able to do so. To the first, as to time of erection—December, 1846; second, size of house—forty feet by fourteen feet; third, temperature kept up—65° maximum; fourth, supposed extra power—none with safety; fifth, sufficient or insufficient for forcing—insufficient, if the temperature out of doors is much below 20°; sixth, effects on plants or fruit—decidedly beneficial to the former when the system works well; seventh, if any accidents—none, but has required greater care and attention than half a dozen other fires working flues and hot-water apparatus."

Another writer, Mr. Morris Todd, gardener, East Sutton-place, in Kent, states much in favour of the Polmaise system, but refers to the defection of the iron plates, and speaks in favour of substituting brickwork for iron. Mr. Kendall, of Stoke Newington, has paid much attention to the working of the system in his houses, and reports exceedingly favourable of it. He commenced with it according to the plan pursued by the late Mr. Meek, of Holmsdale House, near Nutfield, but he discovered defects in its operation, and, by alterations and additions, he states he has now at work a cheap and durable apparatus, in all respects economical. Mr. Kendall considers the iron plates very liable to accident, and the results the probable destruction of the plants, but otherwise, highly commends the system.

Mr. Fitzsimon, gardener to the Duke of Leeds, at Hornby Castle, near Catterick Bridge, in Yorkshire, states, "He has had a pit erected, and heated by Polmaise, which has been constructed to test the utility of the system. It answers very much to my satisfaction; with a very moderate fire I can have a bottom heat of 90°, and the top temperature I can regulate by the bottom ventilators. I have the pit filled with nursing pines, which seem very happy in the soft, warm, humid, moving atmosphere that surrounds them. The pit has only been constructed a few weeks; the expense was little more than that for a common flue. I am quite an advocate for Polmaise, and at some future time I may try it upon a larger scale. I think it might be successfully applied in heating vine borders."

Mr. W. Wren, a contributor to the *Gardeners' Chronicle*, remarking on the opposition to Polmaise by some individuals who assert that the air passing over heated plates must of necessity become parched, adds, "I confess my inability to understand this, and Mr. Fortune speaks of finding it the reverse. The moisture existing in the air cannot be destroyed; and, if the hot-air chamber be made of some unabsorbent material (iron, for instance), as it ought always to be, it must be impossible for the air to become parched. As to the splitting of the plate, and the destruction of brickwork by its expansion and contraction, I must refer those who maintain such objections to the very sensible and instructive letter of Mr. Robert Hazard, in the *Gardeners' Chronicle* of Saturday last; and if they are willing to accord to these statements and recommendations their due weight, they must admit that their most material objections are satisfied.

"It has been urged that no weight can attach to the opinions of those who support Polmaise without a practical acquaintance with its operation; if so, the objection must apply with equal force to the arguments of its opponents, who in no one case, I believe, possess any practical knowledge of the subject. On the other hand, an objection which does not apply has been made against hot-water pipes, viz., that 'they radiate a dry heat.' This is an error. Caloric, supplied either by pipes, flues, or any other apparatus, cannot, in itself, give out moisture; and it would be absurd to speak of its giving out 'drought,' which is but a negative quality. But it 'radiates' the moisture with which it is in contact."

Reference is above made to a letter sent by Robert Hazard, Esq., of Bedminster Bridge Works, near Bristol, in which he observes "that certain individuals are beginning to experience some defects. These defects are not in, neither are they attributed to, the system, but it seems that the mechanical means of carrying out those principles which have become notorious by the agitation of the Polmaise discussion are subject to serious objections. I allude to Mr. Fortune's letter, which complains of splitting of the hot plate, and impossibility of avoiding destruction to the brickwork by the expansion and contraction of the iron. Now, it is certain that if this objection continues, Polmaise, with all its advantages, must be given up, and we must either fall back to the old system (to which, by-the-bye, we shall never be reconciled, after having had a glimpse of better things), or we must seek some other means of carrying out those principles to which we have recently subscribed. The former course cannot be thought of, viz., that we should relinquish what we know to be good because at the outset there have been some few false starts. The error appears to me to have arisen in the supposition that it was only necessary to adopt currents of air as the vehicle of heat, and the principle was so omnipotent that any contrivance, however rude, would suffice for its application. Owing to this feeling, we have had too many directions in this style,—'There is only an iron plate wanted, a few fire bars, so many hundred bricks, which altogether will cost so much, and you may attain the perfection of heating:' a kind of '*Veni*, *Vidi*, *Vici*' view of things, which might have done very well once upon a time for the Roman emperor, but is not an advisable rule of conduct upon all occasions. The greater any one's experience is, the more readily will he acknowledge the difficulty of causing currents of air to move precisely as they are desired under the varying circumstances of wind and weather, and an unstudied arrangement of bricks and hot plates will not be the most likely to effect it. In regard to the particulars which you require of temperature produced, &c., and the name of the party supplying the plate, I do not see how any good is to be hoped from such details; neither do I see that it is right to attach blame to the tradesman for the splitting of his plate. It must always be expected that a plate of iron, intensely heated in the centre, and comparatively cool round the sides, would 'go,' from the unequal rate of expansion. Neither is this to be prevented by having it cast a long time before using, and allowing it to season, like a piece of mahogany. Also, wherever you have iron work fastening into masonry, you must look for the destruction of the latter. I have myself seen church towers tied together with iron braces when the mere change of atmospheric temperature has caused them to push the stones completely out of place; and must not this action be tenfold increased when the iron is raised to red heat, sufficient to cause the air passing over it to scorch the plants in its immediate neighbourhood? It will be necessary, before the advantage of the new system of heating can be made practically evident, to substitute for these rude arrangements some more philosophical heating apparatus; you must have, instead of the hot plate of small dimensions (which it is consequently necessary to heat until it is in danger of splitting), a larger radiating surface, raised to a moderate temperature only. Your atmosphere will then be more wholesome, the air will never scorch, the fire will be economised, because not expended in the chimney, and, if my system were adopted, there would be no fear of the bricks being pushed about, since my apparatus is complete in itself, and expands and contracts altogether; there is no brick fire-place, and the smoke escapes in a series of pipes, radiating as it goes. These tubes are, of course, out of sight, and lead at last into an ordinary flue. It was once asked in a depreciating tone in your columns, if my plan had not been attended with such practical difficulties as to prevent its general application? I answered at the time that there was no foundation for the insinuation, and subsequent experience confirms my statement. I cannot help adding, that if the same question were put to those who regard the hot plate as part and parcel of Polmaise, they would scarcely be able to give a satisfactory reply."

From all the correspondence we have received, or read in other communications, furnished by persons who have tried the system, it appears the principle meets approval; and where it has not realized all expectations, arose from defective constructions, or anticipations which the system was never calculated to realize.

The principle is the same in Mr. Hazard's system, but it is not liable to any injurious consequences from an iron plate cracking, &c.; the fire passing through numerous pipes, gives a large heated surface; whilst it wholly avoids dangers from the casualties named above.

In former numbers we have inserted extended remarks on Mr. Hazard's system, which, as far as we have tried it, as stated, has our entire approval.

The approaching season of heating structures, forcing flowers, &c., has induced us to introduce the subject at length in our present number, so that our readers may have more practical information on a subject which is of much importance in the winter and spring cultivation of flowers.

TO KEEP CAPE HEATHS BUSHY.

One of the greatest faults among the growers of Heaths is that of allowing them to grow long and straggling, and ill-shaped. There is but one way to prevent this, and that is, to stop at the end of their shoots while very young. This is the reason we recommend the amateur to begin with very small plants. If it is inclined to be tall, pinch the top out; if any of the side shoots are inclined to crumble, pinch the ends out. The effect of this stopping is to make them throw side shoots, and form thicker foliage. Thus, to form a good bushy plant, you cannot well take off the top shoot too soon; and as the side shoots lengthen, pull out the ends, and they will again form side shoots; so that, with care, and stopping the joints at equal lengths, and especially shortening those which would grow faster than the rest, a plant may be made feathering down to the very edge of the pot, and this must be constantly done, even as the plants get large, whenever any branch is inclined to grow out of shape.

THE HEARTSEASE, A FEW REMARKS UPON.

BY PENSEE.

For some years this lovely humble flower has been a great favourite with me, and as I think every volume of this Magazine ought to have some notice of it in its pages, I am induced to forward the general particulars of my mode of treatment, and which I am confident has not been exceeded in success by any grower I have seen in the west of England, nor even equalled by the specimens I have on a few occasions seen at the London celebrated shows. I have taken this early period of the volume for 1848 in consequence of the next month (March) being a very favourable time for striking cuttings. I have three beds of Heartsease in the open air, but in order to preserve a suitable stock I have a number of all my best kinds grown in pots, and kept in winter in a dry cool frame-pit, keeping them about a foot from the glass. From these plants I take off my first race of cuttings. I do not take the very vigorous, erect-growing shoots, but the moderate, side-growing ones, cutting them close under a joint, leaving the cutting about an inch and a half long,—not more,—dressing away the lowest pair of leaves, then insert them in a sandy loam around the side of the pot, pressing the soil as firmly around the cuttings as I dare, so as not to bruise the stems, otherwise if damaged by pressure they will die. I have two inches deep of drainage, and the pots I insert them in are 32's. I place them in a cool frame, near the glass, having all the light given them I can, but shade them from the sun from ten to three, until they have struck root. Too much shade is very injurious; they will soon begin to damp off if care is not bestowed in that particular, and yet they require shade from hot sun. The frame I put them in is a small one-light box, as is usually termed, and nearly every cutting succeeds. I pot them off singly into 60-sized pots, and early in May plant out what I require for the open bed, and repot such as I purpose to grow in pots into 24's. The soil I use in pots and beds is prepared as follows:—Twelve months before using I get the turfs from a sheep pasture; it is a small close, an acre in extent, near to my farm-yard, and where the sheep are kept for any ready purposes. I only have the turf pared about three inches in thickness; this is procured every spring, and laid up in a heap. In placing it I have a layer of turf, and over it I sprinkle two or three inches thick of well-rotted hot-bed dung and leaf mould, and thus proceed to the completion: I have it turned over, chopped, &c., once in summer and next in October; and at the potting season, and making up the beds in the open ground, it is fit for use. I have it a foot deep in the bed, and a drainage of sticks, &c., several inches deep, is laid over the bottom. My beds are formed with the ends to the mid-day sun, and to screen the plants, which is essential, from half-past twelve o'clock to three in hot weather, I have a canvas screen stretched to two side posts, which is drawn aside at the latter hour. The plants put out into a bed at the end of April or early in May, bloom from the end of June to the close of the season. I always plant another bed in September, and these, surviving winter, begin to bloom by the 1st of April, and continue to Mid-summer, or even later, in vigour.

My treatment of those grown in pots is to give a due attention to re-pot, give shade, &c., as circumstances require.

In order to have the flowers of an increased size, I take away all side shoots, and only retain a few, three or four, vigorous, erect-growing ones, and thin away the flowers too, retaining only one, or in some cases two, to a single shoot. I apply manure-water occasionally, but am careful it is not poured upon the plant. I also lay an inch or two deep of well-rotted cow dung over the soil around the plant a foot or so; this supplies nutriment, as rain water, &c., filters through it; it also keeps the soil cooler in hot weather.

I always strike a second lot of cuttings towards the end of September, as the spring period and this are the very best for succeeding; the summer season is not suitable, and when it is then done they must be inserted in a border with a north aspect, or, if in pots, where they can be kept thus cool and shady. I usually save seed, and have raised several of the best grown. The seed I obtain from my early bloom I usually gather in July and early part of August; I sow it immediately; the plants become strong before the end of the season, and bloom vigorously the following spring and early summer. The seed I obtain late in the summer I sow early in March, and plant out as soon as strong enough: they bloom freely during the after part of summer. I have all seedlings for the first season grown remotely from my select plants, so that my seed from this latter lot be not impregnated by any inferior flower in marking or form.

A more interesting department in the culture of flowers does not present itself than raising seedlings. Many complaints have been made of plants suddenly dying. This, I believe, is generally occasioned by the main stem being twisted by the wind. To prevent such disaster I have small sticks pricked in among the shoots, and some of them are hooked, so that the plants are staid in their natural position. When attacked by mildew, I sprinkle the upper as well as under part of the leaves, &c. This always destroys the pest and restores the plants.

THE ROSE:—ATTAR, OR OTTO OF ROSES.

BY ROSA.

Of all the flowers which adorn the garden, none, perhaps, exceed the Rose in beauty of form, delicacy of colour, or sweetness of perfume. The different species of this flower are exceedingly numerous, amounting to at least sixty, and the varieties are upwards of a thousand.

The Rose has, in all ages, been a favourite with the poet, and it has also formed a part of the decorations at festivals and religious ceremonies. A French writer characteristically observes, "The most populous nations, the mightiest cities, the richest empires, have disappeared from the surface of the globe; the most powerful dynasties have been ingulfed in the revolutions and the changes of ages, but a simple flower has survived all these political storms, without suffering a change in its destiny. The homage that was rendered to it three thousand years since, the favour in which it was held, are still the same; no other flower has been so much celebrated for so great a length of time. In almost all languages it is employed as the emblem of beauty, and used to express modesty, innocence, and grace."

In accordance with these feelings of the ancients, a supernatural origin was attributed to it in their heathen mythology, and it was accordingly said to have sprung from the earth on the spot where the blood of Adonis was shed, after his conflict with the wild boar.

In ancient Rome, during public rejoicings, the streets were strewed with Roses; and at Baiæ, when festivals were given on the water, the whole of the neighbouring lake appeared covered with this lovely flower. It was the practice, also, to encompass the head, and even the neck with garlands, composed almost entirely of Roses.

A curious custom existed in France, until as late as the middle of the seventeenth century; the different princes and peers, even those of the blood royal, were to present Roses to the Parliament of Paris, in the months of April, May, and June. The nobleman whose turn it was to perform this ceremony caused Roses and other sweet-scented flowers to be strewed over all the apartments of the parliament house, and presided at a splendid breakfast, at which the president and counsellors, and even the subordinate officers of the court, were present. He afterwards went through each chamber, causing a large silver vessel to be carried before him, containing as many nosegays of Roses and other flowers, either natural or artificial, as there were guests present. There was an officer attached to the parliament, with the title of Rosier de la Cour, from whom the nosegays which formed these presents were purchased.

This ceremony appears to have been rather an expensive affair, and disputes frequently arose as to its performance, particularly in the case of princes of the blood-royal, who, at times, considered they ought, on account of their rank, to have been excused from presiding.

Roses have also been employed at funerals, to cover the coffins of young persons and children, and the friends of the deceased have, at certain times of the year, decorated the tombs of their relatives with garlands of the same flower. At the coronation of the kings of England, a certain number of young ladies precede the procession, scattering flowers as they go. The Rose is also employed as a crest, or as a principal bearing in a coat-of-arms. We must all remember, in English history, the calamitous civil wars, which lasted for many years, between the Red and White Roses,—the houses of Lancaster and York. In some parts of France, a Rose is the prize of the victor in many a village festival.

The sweet scent of this flower naturally attracted the notice of mankind, and a decoction of the flower-leaves, called rose-water, has been in frequent use; it has been employed to sprinkle the interior of religious edifices, and is used in the font at baptisms, by the priests of the Roman Catholic church. But the most beautiful produce of the Rose is the attar, or otto, the essential oil of Roses. The species most usually employed in the preparation of the attar are the Rosa moschata and the Rosa bifera officinalis.

The discovery of the attar is thus fancifully described:—A Mogul princess, with that profusion so peculiar to eastern manners, had caused a kind of basin in her gardens to be entirely filled with rose-water, and was amusing herself on its sweet-scented waves with the Mogul emperor. The heat of the sun had disengaged the essential oil from the water which contained it, and it was observed floating on the surface of the liquid, when its powerful odour was soon discovered.

There are two methods of obtaining the attar. At Tunis and in Persia the Musk Rose is employed for this purpose. The rose-leaves are collected, and placed in a wooden vessel, nearly full of the purest water, which is exposed for several days to the heat of the sun; this disengages the essential oil, which floats on the surface of the water; it is then carefully collected by means of a small piece of fine clean cotton-wool, tied to the end of a stick, from which it is squeezed into small bottles, which are afterwards carefully closed. This butter of Roses, as it is sometimes called, is of a yellowish tinge, and semi-transparent. It has the property of keeping for a length of time without becoming rancid, and the aroma which it yields is so powerful that a quantity which would adhere to the point of a needle is sufficient to perfume an apartment for more than a day.

The second method of preparing it is by distillation. A quantity of fresh Roses, say, for example, forty pounds, are put into a still with sixty pounds of water, the Roses being left as they are with their calyces, but with the stems cut close; the mass is then well mixed together with the hands, and a gentle fire is made under the still; when the water beings to grow hot and fumes to rise, the cap of the still is put on and the pipe fixed; the chinks are then well luted, and cold water put on the refrigeratory at top. A moderate fire is kept up, and the distillation continued till thirty pounds of water have come over, which is generally accomplished in about four or five hours. This rose-water is again poured on a fresh quantity of Roses, that is, forty pounds' weight, and from fifteen to twenty pounds of water are drawn off as before. The rose-water thus prepared will, if the flowers have been good, be found highly scented with the essential oil. It is then poured into pans of earthenware or tinned metal, and left exposed to the fresh air for the night; the attar, or essential oil, will be found in the morning congealed, and floating on the top of the water; this is to be carefully separated and collected, either with a thin shell or a scummer, and poured into a vial.

The quantity of essential oil to be obtained from the Roses is very precarious, as it depends not only on the skill of the distiller, but also on the quality of the Roses and the favourableness of the season. In order to procure as much as three drachms from one hundred pounds' weight of rose-leaves, the season must be very favourable, and the operation carefully performed. The colour of the attar is no criterion of its quality.

ON SELECTING HYACINTH BULBS.

It is well known that the bulb contains in embryo all the parts of the future plant and flower. This fact renders it necessary to select bulbs with care, in order to ensure fine specimens; so that good bulbs must be planted, or fine flowers will never be the result.

A bulb that is spongy, however large, never produces a bloom equal to what even a much less-sized one does that is compact, firm in substance, and weighty. Of course the larger such are the more superb the floral specimen.

FLORAL OPERATIONS FOR THE MONTH

IN horticultural pursuits procrastination is productive of very annoying consequences, and is exceedingly hurtful. The effect of deferring necessary operations, whether from carelessness or convenience, is in all cases vexatious and irretrievable. When flowers are to be provided at a certain season, the plants ought to be furnished at the proper period, and whether the supply is to proceed from seed, be propagated by cuttings, or increased by division, a prompt attention, in due course, is essential to success.

IN THE FLOWER GARDEN.

If the weather continue severe sufficient protection must be afforded to all tender plants, but on all favourable occasions, as far as can conveniently be done, take off the covering in order to dispel any damp air. See that all newly-planted shrubs remain secure, so the roots are not loosened by the wind. Planting trees, shrubs, &c., ought to be done as early as possible, guarding against the frosty air damaging the fibrous roots; as little exposure as possible is essential to success in growth. If Rose Trees are to be planted they must be done this month, or success is hazardous, and if they live they do not usually do well that season. Prune the open-air kinds of the entire hardy class. Perennial and biennial plants in the flower bed may be divided. Plant out Hollyhocks as soon as possible, if they are to bloom well the coming season; so with any of the biennial plants. Pink beds, see that the plants remain secure, and stick some whin or fir-tree branches in among the plants, or make a low hedge of them around the bed, in order to screen the plants from the strong cold wind; a top dressing of well-rotted hot-bed manure should be given. Fresh soil should be added to all flower beds; it very much promotes the production of a profusion of flowers. Manures should be laid over the roots of Roses, removing a few inches of the earth, filling up the hollow with well-rotted cow or hot-bed dung, and sprinkle it over with soil, so it may dry. Collect soils, &c., for forming compost, such as turf, peat, loam, &c. If the surface of beds of bulbs has become hard and stiff, stir it over frequently, in order to admit that free atmospheric influence to the roots which is essential to success. Polyanthuses in beds ought to have three or four inches thick of dry leaves carefully laid over it, but not to bury the plants; add a sprinkling of soil to hold the leaves from blowing away, and, if the weather continue severe, a few short sticks pricked in over the bed would support a mat for covering.

Take the first opportunity about the middle of the month, if the weather be dry, to plant the Ranunculuses and Anemonies, placing them at five inches apart, and an inch and a half deep from the crown to the surface; and if the soil be dry, after planting, press the surface with a flat board. If the formation of the bed has not been effected, dig out a space half a yard deep, and put all over the bottom a layer of cow manure five or six inches deep; after which fill up with the proper compost (see Articles upon). Auriculas and Polyanthuses in pots should have plenty of air in fine weather; take off a portion of the surface soil, and fill up with a rich compost (see last month's Calendar for these as well as on Carnations, Picotees, and Tulips). Be careful that the latter-named plants be firmly secured in their positions, so that they be not damaged by wind. A small protection against strong wind should be provided on the bed side and most exposed; and Carnations will require more water now. Heartsease in beds should have a similar protection, and a little fresh soil spread over the bed. Auricula seed should be sown in a light loamy soil, and the pots or boxes be placed in a coal-pit; the surface must be made even by pressure with the bottom of a pot; keep the surface just moist whilst the seed vegetates. Now is the time to make a plan of the flower garden, parterre, &c., and to mark each bed with the kind of flowers required, and then to prepare a stock to furnish accordingly, whether from the sowing seed or otherwise, as with Verbenas, &c.

IN THE FORCING FRAME.

Sow seeds of the tender annuals as Balsam, Amaranthus, Cocks-comb, &c., in pots, and the half hardy kinds as Asters, Stocks, &c., either in pots or upon a bed of soil, &c. When sown in pots do not water the surface at the time, but after a few days if the soil be dry a gentle sprinkling may be given, and afterwards, till the plants are up, great care must be taken to keep it moist, for when once softened, if the seeds become dry, destruction soon follows. Gardenias should be forced now, as also other similar plants. (See list in Stove department.

Cuttings of Hemimeris, Salvias, Heliotropes, Geraniums, Lotus, Anagallis, Verbenas, Petunias, and such like plants for the open beds in summer should immediately be struck, or the plants will be too weak to answer the purpose. If parts of cuttings were put off in autumn they should now be potted off singly into small pots, they will then be well established by turning out time; any long ones amongst them should be stopped to induce laterals and make bushy plants.

Dahlia roots should be immediately put to force; if increase is requisite, take off the shoots when about four inches long.

Dahlia seed should be sown in pots, and only just covered. Lobelias, too, should be potted singly at the close of the month to have them vigorous by turning out time. Boxes and pots of Mignonette for succession should be sown. Achimenes, Gesnerias, Gloxinias, &c., should be introduced to promote their immediate growth, and as soon as the plants have pushed, pot them, singly or otherwise, as desirable. Amaryllis, &c., may be excited in like manner. Hyacinths, &c., approaching bloom, must be placed in an airy, light situation, and to those in glasses give a change of water every three or four days. At the closing part of the month pot singly Tigridia pavonia, and T. conchiflora into small pots. Sow immediately in pots seed of the Chinese Primrose, and as soon as the plants are fit to pot off do so in a rich compost; keep them in heat for a short time, and never water them over-head, as they are liable to be rotted off by its remaining in the centre; care, too, is necessary not to give too much at the roots, for if kept *wet* they soon become sickly. The plants properly treated will bloom fine the same season. The fringed flowered kinds are the best. Cinerarias should now be forwarded by repotting, due attention to watering, &c. They often require fumigating, being so very subject to the green fly. Calceolarias, too, should be encouraged to have them large, they, as well as Cinerarias, succeed best when grown in a warm, moist, airy pit-frame, kept at about 56 degrees of temperature. Thus kept, and temperature increased with the season, they will bloom luxuriantly, duly potted, &c., and when coming into bloom may be removed to the greenhouse, &c. Jacobœa and Guernsey Lilies, &c., should be repotted. Mignonette be sown in pots for early summer blooming. Fuchsias required for exhibition should now be cut in so as to have them a good shape, and after having pushed a little be repotted, thinning away all unnecessary shoots. Cuttings of Pelargoniums put in at two or three different periods, say February, March, and April, duly potted, &c., bloom in autumn and early winter.

IN THE GREENHOUSE AND COLD FRAME.

All air, in dry, favourable weather, must be admitted so as just to keep frost out. If damp a gentle fire may be applied when air cannot be admitted. Pelargoniums to be superb specimens should be repotted into their blooming pots, (read the several articles on their culture in previous volumes,) they must have a free circulation of air around the plants, it gives vigour to the shoots and prepares them for a higher temperature afterwards without injury, and a stronger bloom is produced. Fumigate to destroy green fly. The surface soil in all pots should be stirred up, it tends to health. Epacris, Correas, Coronillas, Acacias, Cinerarias, and other plants will now be coming into bloom, water seldom as possible, but when given, let there be as much as will moisten *all* the soil. Ericas will still generally be inactive, therefore give but little water as required, and recollect their proper situation is in the most airy part of the house, but guard them from north-east winds very carefully. If any mildew appears, dust with sulphur. Camellias, too, should occupy an airy part, and the greatest care taken to keep the soil in an equally moistened medium state, using water of a temperature equal to that of the house; if these points are neglected it is likely the flower buds will drop. Give weak manure water alternate with the other. Continue to preserve all inmates of the *cold frame* in as quiescent a state as possible. In all cases when very severe weather continues for some time, it is necessary to keep the sashes close, and perhaps to retain during day as well as night the matted covering, much caution is therefore required to avoid destruction by damp. Admit air in abundance whenever the weather permits, and occasionally, when a mild day presents, clean the pit throughout, stirring the surface a little, also scrupulously remove all dead leaves and branches from the plants. Carefully and sparingly give water now and then as absolutely required only. By observing these rules injury from frost and damp is avoided. Alstrœmerias, Lilium speciosum, and others should be re-potted. Any young plants which have filled their pots with roots should be potted into larger, as they require, from time to time. If a syringing of the plants over head be really necessary, let it be done in the morning of a day which is likely to be fine, and air be admitted fully.

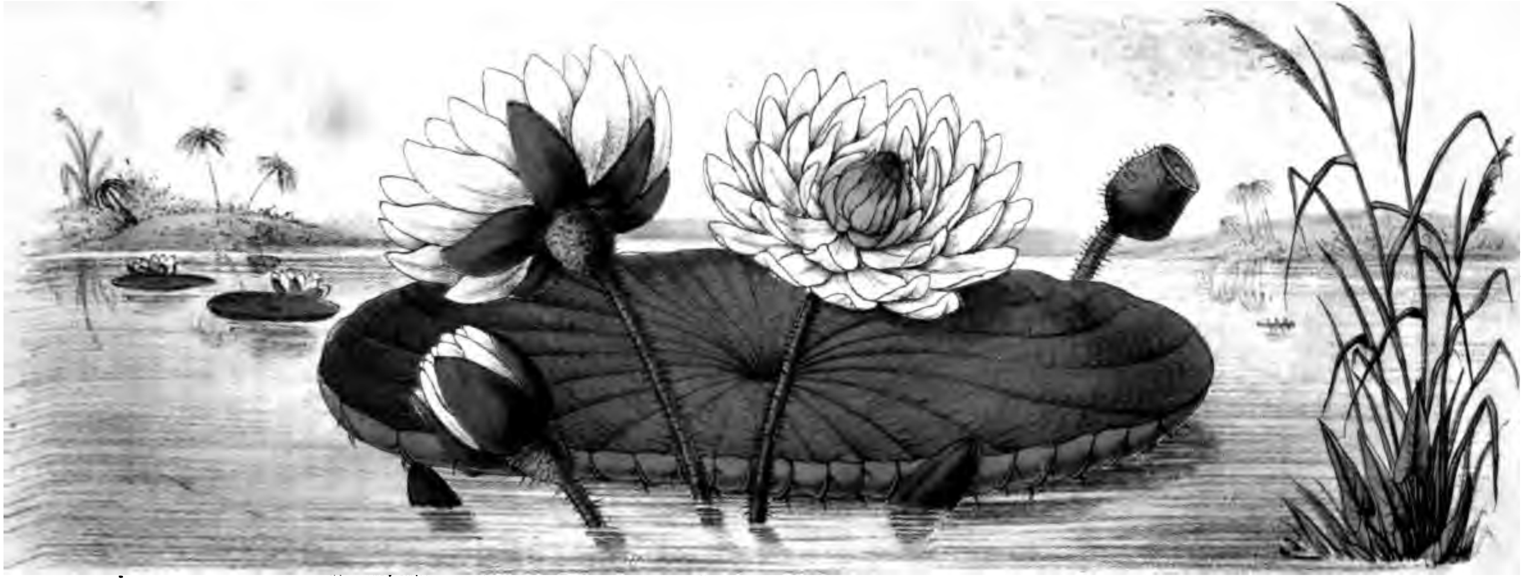
IN THE STOVE.

Old plants of Fuchsia corymbiflora now gently pushed on will come finely into bloom by the first week in May, or if the season be fine, earlier. Exotic seeds should now be sown (see articles in former volumes). Successive introductions of plants forced must be brought in, as Roses, Lilacs, Azalea, Acacia, Heliotropes, Correa, Coronilla, Cineraria, Sweet Violets, Cactus, Cyclamen, Gardenia, Justicia, Eranthemum, Honeysuckle, Pinks, Gesneria zebrina, Nerium, Mignonette, &c., and pots or boxes of Hyacinth, Narcissus, Persian Iris, Crocus, so as to have a constant succession of bloom. (See remarks on Hyacinth in January Calendar). All the plants now enumerated are suited, too, for a warm conservatory, and as that useful appendage is often contiguous to a room they are doubly charming in such a situation at this early season. Orchidaceous plants should be repotted now, as they may require. Take care that a due proportion of moisture is maintained in the atmosphere, although most of this tribe require to be quite dry at the root during the rest season; yet they still require a somewhat moist atmosphere. Specimen plants for exhibitions will require repotting, pruning, &c. Ixoras should be elevated so as to be near the glass in order to set their bloom, they must have plenty of air at all times convenient. Attacks from red spider at the under side of the leaves must be looked after and at once be destroyed, or they will soon spread their ravages, as will be exhibited by the leaves becoming brown and spotted.

APPLICATION OF DRAINAGE TO PLANTS IN POTS.

BY GULIELMUS.

I NOTICE that writers on plant culture at the present day are much more urgent in the recommendation of a liberal drainage to plants in pots than their predecessors were, and I think it is a very great auxiliary in the promotion of the improved cultivation we have arrived at. The health of a plant, in a great measure, depends on a free circulation of water through the soil. The general materials used for drainage are pot crocks, sandstone, and charcoal; it is the best plan to have these of different sizes. Over the hole at the bottom one large, hollow-formed piece must be placed; upon this a due proportion of large pieces must be laid, and about half such proportion of a smaller size, in order to prevent soil from settling through the rougher parts. I advise, too, in all cases, that over these materials a layer of rough pieces of peat or turfy loam be placed. Of course, the larger the plant so will be the pot, and an equal increase in drainage will be requisite. Pieces of charcoal or sandstone mixed with the soil are very beneficial for all the hard-wooded plants, and bone-dust, or small pieces, to the soft-wooded; the fibrous roots cling to these materials. Such are doubly useful; they absorb moisture, and, retaining it, afford a supply for the rootlets, whilst at the same time by such absorption they, in a great measure, prevent excess. I am aware that to provide for such a routine of preparing drainage, and thus systematically arranging it, will require some labour, but if properly attended to it will be done with as much ease as any slovenly method. Now, the materials for drainage may be prepared in wet or some such weather, and in a few hours of labour in this way a considerable stock may be provided; and in placing the drainage in the pots it will be so readily accomplished, and its certain anticipated beneficial results will render it a pleasing attention.



Victoria regia.

From a Drawing in the Museum, at Kew.

(one eight of the natural size.)

FLORICULTURAL CABINET

MARCH, 1848.

ILLUSTRATIONS.

VICTORIA REGIA—The Victoria Water Lily.

THIS noble plant, the Queen of Aquatics, has, by permission, been privileged to bear the title which distinguishes it. It was first discovered by Sir R. Schomburgh, on the first day of 1837, in British Guiana, in South America. That gentleman observes, "that while proceeding up the River Berbice we arrived at a part where the river expanded and formed a considerable basin. Some object on the extremity of this basin attracted my attention, and I was unable to form an idea of what it could be; at length I beheld A VEGETABLE WONDER. It had gigantic leaves, five to six feet across, with a flat broad rim, lighter green above and a vivid crimson underneath, floating upon the water; and in character with such wonderful foliage I saw luxuriant flowers, each consisting of numerous petals passing in alternate tints from pure white to rose and pink. The smooth water was covered with the blossoms, and which possess the additional charm of extensively diffusing a sweet fragrance."

Eight years after its discovery by Sir R. Schomburgh, Mr. Bridges, in his journey through Bolivia, found the Victoria regia in considerable abundance, and he brought home, in 1846, seeds in wet clay, well dried foliage, and flowers in spirits. Mr. Bridges observes, "that the plant grows in four to six feet of water, producing leaves and flowers, which rapidly decay and give place to others. From each plant there are seldom more than four or five leaves on the surface, but in many parts of the lake they entirely covered the surface. I observed a beautiful aquatic bird walk with much ease from leaf to leaf.

"The blossoms rise six or eight inches above the surface, expanding first in the evening, when they are pure white; changing finally, by exposure to sun, to a beautiful pink or rose colour. The largest flowers I saw measured from ten inches to a foot across. They exhale a most delightful fragrance, which at first was compared to a rich Pine

Apple, afterwards to a Melon, and then to a Cherimoya, but so very peculiar is the delicious scent that it is unlike every other, and only inherited by this most noble flower."

NOTES ON NEW OR RARE PLANTS.

ALLAMANDA SCHOTTII—LARGE-FLOWERED ERECT ALLAMANDA.

Apocynaceæ. Pentandria Monogynia.

Two of the most ornamental hothouse climbing plants are the Allamanda cathartica and A. grandiflora; their large, rich yellow, flowers borne in such profusion for many successive months, produce a fine display, and render them deserving a place in every collection. These species have been exhibited for the last two or three years at the London floral shows, and have been much admired. The present new species has been raised from seeds sent from Brazil by Mr. Graham to Miss Barton, of Springwood, near Manchester, at which place it bloomed for the first time in September, 1847. It is an upright suffruticose plant. The specimen at Springwood was two feet high, and grown in an 8-inch pot. The flowers are produced in large panicled heads. They are funnel-shaped, with a large spreading five-parted limb, each being nearly four inches across, of a full rich yellow, the inside of the tube a deeper colour. It is a very ornamental species, well meriting a place in the hothouse. (Figured in *Bot. Mag.*, 4351.)

ACACIA ONCINOPHYLLA—HOOK-LEAVED.

This very pretty, graceful, neat species has been introduced from the Swan River colony. The flowers are produced in spikes each about an inch long, and very numerously, in pairs (at the axils of the leaves) along the branches. The blossoms are deliciously fragrant. It is in the greenhouse at the Royal Gardens of Kew, and deserves to be in every collection. (Figured in *Bot. Mag.*, 4353.)

CLERODENDRON CAPITATUM—THE HEAD FLOWERED.

Mr. Whitfield sent this fine flowering species from Sierra Leone to Messrs. Lucombe, Pince, and Co., of Exeter, and has there bloomed in the hothouse. It is a handsome shrub, and small plants bloom very freely. The flowers are produced in very large terminal heads ten inches across. A separate blossom has a slender tube about five inches long terminating in a five-parted spreading limb near two inches across. They are of a creamy white, and very fragrant. A single head of flowers has forty or more in it. The plant is a valuable acquisition to the hothouse, and deserves to be in every one. (Figured in *Bot.Mag.*, 4355.)

CLERODENDRON SCANDENS—THE CLIMBING.

This pretty hothouse plant was also sent by Mr. Whitfield from Sierra Leone to Messrs. Lucombe, Pince, and Co. It is a graceful climber, of medium growth, and blooms very freely in winter. The flowers are borne in corymbous heads, of from twelve to twenty in each, and being numerous form a large lengthy panicle; they are white, beautifully tinged with rose. A separate blossom has a tube about half an inch long, and the five-parted limb is an inch across. It is a very neat and interesting plant. (Figured in *Bot. Mag.*, 4354.)

GRISCHOWIA HIRTA—HAIRY GRISCHOWIA.

Melastomaceæ.

This is another of Dr. Karsten's plants, and has also been flowered at Berlin, and recently published. It forms a new genus, which Dr. Karsten has dedicated to M. Grischow, a chemist, and an excellent botanist. It is a very ornamental species, forming a branching upright shrub, of from two to three feet high, with four-cornered, densely hairy stems; small hairy leaves, and numerous rosy-purple flowers. The leaves are opposite, elliptical, about an inch long, seven-nerved, and hairy, particularly on the under side. The flowers are borne in trichotomous cymes, at the ends of the branching shoots, and as new buds continue to be formed between the branches, the plants continue for a length of time an object of attraction; individually the blossoms are attached by short pedicels; they have four oblong-roundish petals, of a pretty rosy-purple colour, and in the centre, a tuft of eight horizontal stamens. It was found on the Cumbre de Valenzia, at an altitude of from 5000 to 6000 feet, mostly in sunny and airy places, on the ridge of the mountains. The flowering season was November and December. The plant will be an acquisition to our plant-houses.

SCHWERINIA SUPERBA—SUPERB SCHWERINIA.

Melastomaceæ.

This, one of the many splendid Venezuelan plants introduced by Dr. Karsten to the Berlin gardens, has been flowered by M. Decker, and has been recently published by its introducer. He has constituted it a new genus, dedicated to his Royal Highness the Grand Duke of Mecklenburgh Schwerin. It forms a splendid shrub, growing from six to ten feet in height, with smooth round branches, bearing fine deep green foliage, and beautiful crimson blossoms. The leaves are opposite, lanceolate, three-nerved, and hairy on the lower side near the nerves. The flowers are produced freely from the axils of the upper leaves; they are erect, solitary, from an inch and a half to two inches across, with five obovate spreading petals, which are of a brilliant crimson, supporting a tuft of large yellow horizontal anthers. Dr. Karsten estimates this as one of the best show plants lately introduced to Europe; and such it appears to be from the representation given of it.

TRITONIA AUREA—GOLDEN-FLOWERED.

Iridaceæ. Triandria Monogynia.

This beautiful Ixia-like flowering plant has been recently introduced into this country from Caffraria. It is a bulbous perennial, growing half a yard high, and blooms profusely either in the greenhouse in pots, or planted out in a cool frame, or warm border in front of a stove or greenhouse. The flowers are borne in terminal spiked panicles, many in each, of a very rich orange colour. A separate blossom is nearly three inches across. It is a valuable acquisition. Messrs. Backhouse, Nurserymen, of York, possess the stock. It merits a place anywhere. (Figured in *Pax. Mag. Bot.*)

NEW PLANTS NOTICED IN NURSERIES, &c.

HINDSIA.—A new species which Messrs. Veitch's possess, and recently exhibited at the Horticultural meeting at the rooms in Regent-street, London. It is a dwarf bushy plant from six to nine inches high. The flowers are terminal, in bunches of four or more in each, of a reddish-lilac colour, each flower being about an inch long, and are produced numerously. Blooming in the winter season, and requiring only a warm greenhouse renders the plant valuable.

FUCHSIA DEPENDENS.—This flower of this new species is somewhat like those of F. fulgens as to form and colour. The flowers are produced at the axils of the leaves in fours. The flower stems are sent out horizontally seven or eight inches long, at the end of which are several leaf-like bracts, out of which the flowers push forth, hanging down in bunches, and then rising tier above tier, gives the plant a pretty appearance. The plant has been exhibited by Messrs. Veitch's at the Horticultural Society's meeting rooms.

JASMINUM NUDIFLORUM.—This is one of the new plants sent by Mr. Fortune from China. It blooms in the open air against a wall in the Society's garden at Chiswick. The plant was recently in bloom, and the flowers being produced before any foliage appears, renders the plant very interesting, and especially so to occupy a situation against or near a dwelling.

SALVIA OPPOSITIFOLIA.—A new hardy species, grows two feet high, the flowers are borne in long spikes, of a pale yellow colour. It is in Messrs. Veitch's collection.

At the Royal Gardens of Kew.

BEGONIA PARVIFOLIA.—The plants bloom very freely, and the flowers are a very pearly-white, with yellow centre.

BEGONIA HOMONYMA.—The plant was two feet high, and its flowers are of a very pretty, rosy-white colour; it is a handsome species.

VERNONIA AXILLIFLORA.—The flowers are produced at the axils of the leaves, they are of a thread-like appearance, borne in tufts, a beautiful blue, each tuft being about an inch long. Being freely produced, the plant has a very interesting and pretty appearance. It well deserves culture in every collection.

NOTES ON FLORISTS' FLOWERS.

PANSIES.

The following twenty-four kinds were selected by us as being the best which came under our notice during the past season.

Achilles (Turner).—Rich yellow, with a broad margin of puce; smooth, even and of good substance.

Arethusa (Brown).—White, with a well defined eye and clear purple margin; smooth and very regular.

Attraction (Hooper).—Yellow, with a narrow margin of purple; attractive large flower.

Blooming Girl (Hooper).—White, with a broad bright blue-purple margin; a little undulated on the edges, otherwise a fine flower.

Candidate (Thompson).—Pale yellow, with a broad margin of deep purple; smooth and flat, good size and form.

Climax (Bell).—White, with a bright purple margin, very distinctly defined; medium size, good circular form, but does not lie quite flat.

Dr. Wolff (Backhouse).—Golden yellow, with a broad bronzy-purple margin; smooth and green.

Duchess of Rutland (Thompson).—White, with a margin of pale lilac; eye well defined, good form, and very pretty flower.

Gloria Mundi (Hooper).—Golden yellow in the upper and lower petals, each narrowly margined with bright bronze; a striking flower when true.

Great Britain (Hooper).—Yellow, with purple margin; flat and of fine form.

Lady Sale (Hooper).—White, with a deep purple margin; well defined, medium size.

Lord Hardinge (Gosset).—Straw margined with rosy-purple; very distinct and pretty, and well proportioned.

Model of Perfection (Chater).—White, with a broad margin of rich mulberry; very smooth and even, medium size, a stout and fine flower.

Optimus (Turner).—White, broadly margined with dark purple; well formed.

Perfection (Thompson).—Bright yellow, with a broad margin of crimson-purple; well proportioned and stout.

Pizarro (Thompson).—Yellow, with a broad margin of bronzy-purple; very smooth and even flower.

Rainbow (Hall).—A glossy dark flower, having a ray of blue around the eye; full size, very smooth and even, fine.

Shakespear (Thompson).—Yellow, with purple margin, well defined; lies flat, but is not truly proportioned.

Superb (Hore).—White, with a broad margin of blue, good size; stout and smooth, a striking and fine formed flower.

Supreme (Youell).—Yellow, having a broad margin of rich maroon, full size, stout; smooth and very even, a fine flower.

Titian (Turner).—Golden yellow, broadly margined with bronzy-purple, well defined; smooth and even formed flower.

Wonderful (Hooper).—Golden yellow, with a rich bronze margin; stout and fine form.

Zabdi (Thompson).—Yellow, with a broad margin of deep bronzy-purple; smooth and regular.

THE DAHLIA:

A FEW WORDS ON ITS PROGRESS.

BY G. G.

Of all the subjects that have engaged the attention of florists within the last half century, nothing can exceed the interest excited by the Dahlia; nor has any flower so completely emerged from its state of singleness and comparative insignificance to assume a first rank in the court of Flora. It would hardly be interesting to go into the history of its early days in England, but it may be worth mentioning that no expectation of double flowers was raised by the first dealers. Mr. Dennis, of Chelsea, was the first to raise a scarlet variety; and Mr. Lee, of Hammersmith, who wanted to buy it, and might have had it at a fair price, was glad to pay a very much larger sum than might have bought the stock for only the plants he required the year it was let out. The first double flowers were imported from the Continent, but they were sad specimens of deformity, and there appeared for a considerable period to be no very distinct notions of quality, except the degree of doubleness. The first notions of a standard were crude and undefined, but there was soon a general disposition to disapprove of the disk being at all visible. There were, however, a most abundant harvest of oddly-formed flowers, which seemed to have no affinity to the noble double varieties which soon sprung up from seed. Anemone-flowered, Ranunculus-flowered, Hollyhock-flowered, and Globe-flowered, were to be found in the catalogues, and these had a great run for a season or two. Their inferiority, however, was so apparent, that they only required to be condemned to lose all their popularity in a single season. The establishment of open Dahlia shows in London, and the immediate formation of the Metropolitan Society to encourage them, gave an opportunity, and it was at once decided, that none of the Globe, or Anemone, or Hollyhock-flowered should be eligible to show for prizes, and this, in 1832, totally annihilated the sale of these varieties; we well remember seeing one celebrated grower in a towering passion, because he had been or sent all over Europe for novelties of this description, and had expended more than 100*l.* in what he afterwards alleged never produced him as many shillings. From the period of commencing shows and the laying down of the standard, since universally recognised, the flower rapidly improved. Messrs. Wells, Inwood, and Douglas, had been the greatest raisers, although only private gardeners, and hundreds of the best of their day went by their name. But one day, being out with Mr. Hopwood, of Twickenham, we chanced to call on Mr. Lynes, at Springfield, and saw about 200 seedlings; our eye fell at once upon the celebrated flower, afterwards called Springfield Rival; and seeing it among so many that were good for nothing we offered 10*l.* for it. Mr. Lynes declined, on the ground that he had promised Mr. Inwood the refuse of all the lot, and, therefore, he could not do anything with us till he had had Mr. Inwood's answer, for he had promised to give 1*l.* more than anybody else. Of course we were quite certain that we should not get it under these circumstances, and we left it to its fate, well knowing, however, that it was the first of a new and greatly improved race. Those who paid any attention to the Dahlia will remember that it came out as Inwood's Springfield Rival, and gained greatly by comparison with Widnal's Perfection, shown the same year. From this period the flower that fulfilled three great conditions in the standard for the perfection of the Dahlia rivetted general attention. The outline was a perfect circle, the symmetry was mechanically complete, and it was more double than any other that approached roundness. The eye was mostly sunk, and the face was not, therefore, completely globular; but it was so eminently superior in all other respects, that it had no competitor. In symmetry it beat everything in cultivation. We should not have dwelt on this flower so much, but that it seemed to confirm the propriety of the properties laid down; that it gave a great impetus to the fancy, and hundreds began raising seedlings. But the most esteemed varieties for some time wanted the beautiful order and uniformity of the Rival, and looked poor by the side of it.

From this time forward the progress was rapid. Every year produced hundreds of novelties in colour, and the greater part, after being described in that, this, and the other extraordinary shade, edge, stripe, or mottle, was wound up with the magic words, "form of Springfield Rival." We do not see the flower exhibited much now, but many are sent out much inferior to it and to be shown, and we fear it has suffered the fate of many florists' flowers, been propagated in the same place, from the same stock, and declined, as all crosses always do, under similar circumstances, and as flowers must do in common with ordinary crosses. Among the exquisitely formed flowers which have occasionally started up season after season, few have had the useful quality of constancy in the bloom. For the most part then towards the centre the least interruption to the growth, whether by excessive heat, want of water, poor ground, or a bad situation, have prevented the centres from filling, and after a season or two they have been abandoned. But not many seasons since a still newer and better race has started and maintained its place. Keynes' Standard of Perfection, as double as a Ranunculus, though condemned at the Surrey Gardens, surpassed all its predecessors, and this race seems more tractable than the former, for many have since come in the same way and of a different colour. Standard of Perfection, Standard Yellow, Scarlet Gem, Sir Robert Sale, Berryer, Marchioness of Cornwallis, and some other of our present close varieties, absolutely make the Springfield Rival look poor, and nothing but this style of flower ought to be acknowledged as good new varieties. We ought, however, to turn back to the period when a London Society of Florists started to oppose the Metropolitan Society, and the latter chose to lay by rather than run counter to anything established for the same object. However, two or three new things belonging to the Secretary and the principal Members having been cried up as first class novelties, and soon proved to be entirely worthless, the Society totally failed, after two or three struggles, which left them in debt, and the Dahlia trade was on the wane. A meeting, however, at Slough, subscribed 100*l.* for a Dahlia show the next year, which was got up at Baker-street Bazaar, and has been continued under the control of the Metropolitan Society, which, however, having taken up other flowers as well as Dahlias, had, in the opinion of Dahlia growers, used more of the funds than was warranted for other subjects, and it was unanimously resolved to dissolve the Society for the purpose of reorganizing the concern altogether, and establishing a Dahlia Society as a separate and distinct affair. This Society has already many trade subscribers, and will have more, and one feature in it is especially encouraging to young growers who have but little room. Prizes are to be given for the best six new flowers sold out by the subscribers only, and all persons, whether members or not, are to be free to show in this class without entrance. This is a new feature, for the amount of entrance money deterred many from risking, who would have shown if it had cost nothing, and thus will be tempted to bring the best new flowers as well as of old ones. The varieties originally exhibited for prizes were of the self, edged, tipped, and mottled kind; but as there were many fancy varieties remarkable for their brilliant colours and ugly or imperfect forms, it was proposed at the Baker-street Show to give prizes for these fancy kinds, much to the annoyance of those who never grew them; but it led to an entirely new branch of trade, and to very strenuous endeavours on the part of the cultivators to procure and raise those which were formed the best; perseverance will do great things. The fancy flowers are now the most gorgeous and effective of the whole tribe, they are rapidly improving in form, some of the later ones proving equal to the best of the ordinary show varieties. The difference alone making the distinction. A true fancy flower should have the two colours highly contrasted and nearly equal, the colours strictly defined, not shaded off, although growers are too fond of placing among the fancy flowers whatever is rendered by its singularity unfit for a regular stand, and may be deficient in form. But the time has arrived when the test for show flowers may be applied to the fancy varieties, and these may be found among the seedlings, certified last autumn not only as good in form as a majority of the ordinary kinds, but we may say that this class was judged as critically by the proper standard as any of the other sort, and there were flowers of less merit in their class than the fancy flowers were and yet had prizes, Jenny Lind, Mrs. Shaw Lefevre, and Jeannie Deans. These repeatedly noticed claim a place among every half dozen shown, and we may now certainly reject every new variety of fancy flower that does not possess the proper points in a fair degree. There are many already that are round, double, and symmetrical, with good centre; and a stand having a flower with a bad eye, a disk, or much confused, may safely be made to cast the stand. With regard to the generality of Dahlias this year (1847) we have not advanced in form, though we have in novel colours. There is, however, much to be said both ways with regard to novelties; we see them exhibited of only one man's growth. He may starve them or grow them too large, the one prevents the developement of their proper form, the other makes them coarser than they naturally come. The last season exhibited both extremes, and scarcely any of the novelties were shown to advantage on that account.

We are not inclined to go into a critical examination of their claims, because we do not think we have seen one-third of them so bad or so good as they will come. We may, however, be permitted to say that there is nothing extraordinary,—no Standards of Perfection, no Scarlet Gems; nothing of that class: the majority will be best described by the simple words, "good, but of the old-fashioned forms." The flowers that will have the best run are those which proved the most certain and constant. It would be impossible to set any down as at all out of the common way. The most round, close, and best, was Delight; but the only time it was seen it was falling to pieces and among the rejected; but Mr. Whale never did exhibit well, his flowers were always better grown and better shown after they were out than ever they were in his hands, and if the flowers, when he exhibited them, were in their true character, Delight will stand before all other edged flowers, for in the forward state it was, the colouring was excellent and the form unexceptionable. Nobody will lose much by purchasing those we have seen and described, because the principal shows will be for new flowers sold out by the subscribers to the Central Dahlia Fund, and as there is neither entrance nor subscription, there will be hundreds of new and small growers purchase all. Of the uncertainty of the Dahlia much may be said. Turner's Metropolitan, Bourne's Marchioness of Ormond, Wilmer's Egyptian King, Brown's Duke of Devonshire, and many others exhibited as true models of perfection, from some cause or other became so very inconstant, that they were discarded by the generality of growers, because the obtaining of a good specimen seemed hopeless. Yet those who had perseverance have shown them well, though they grew a score plants perhaps for the sake of a bloom. The encouragement for raising Dahlias is as great as ever. Every season convinces us that there is very much more to be done yet. A flower that is always up well in the centre exhibits something else deficient. Essex Triumph is pretty constant, almost always well up, but there is coarseness. Shylock is of the same school. Gem, as an edged flower, is of a still older fashion. Queen of England was altogether so overgrown as not to show its real character; we never saw it growing, but we are quite sure small flowers would be better formed and better marked. The Maid of Kent is a second Radzville, but it was its first year, and as it goes out from a small stock every dry root will be a thing of value, if the flower prove true, for the colour is as distinct from Radzville, that they would look well if they were two of half a dozen. We know they are reflexed, but the centre is well up. They are alike in form and size, and exceedingly pretty. It is, therefore, a lottery in which the chances may come all prizes. Of the fancy kinds, Mrs. Shaw Lefevre and Jeannie Deans are very conspicuous; both are reds and whites, but the reds are indescribable; they are not scarlet nor blood, nor crimson but peculiar, and both different from each other, and from those we have. Jenny Lind is a rich purple tip, like many we have, but better; but nobody believed when prizes were prepared for fancy flowers, three or four years ago, that they could ever become what this year's seedlings make them. We had nearly lost sight of another novelty or two among them, we mean Belted Knight, an orange and white; Lady Sale, a yellow and white; and Mr. Turner has one that he seems inclined to put among other show flowers, because it is too good for the fancy class. However, we must confine our remarks to those we have seen without condemning others, for the early frost completely extinguished the hopes of many who had good things; they could not exhibit at all where alone exhibiting is of real service and certificates are of real value. Dahlia buyers should this year open their hearts a little, for as they can show new flowers for nothing they may calculate on getting a good deal of their money back, besides the pleasure of looking forward to novelties which we have never seen, but which, if half so good as represented, will be worth all the money asked for them, and give a new feature to the shows, and create many new exhibitions. Success which must await some of the youngest of them, where so many prizes as two-thirds are offered, will turn beginners into enthusiasts, and greatly promote the interests of the trade, who will be encouraged in turn to continue the liberal supporters of amateur growers, and thus render permanent a feeling which, if neglected, subsides as naturally as the water after a storm. We should be very glad to see the amateur growers, from one end of the kingdom to the other, unite in supporting those dealers who encouraged the shows, and very little reflection would induce them, as an act of justice, to do so, for there are many nurserymen who rely on the amateur almost entirely for the most profitable part of their trade, but whose names are never seen as supporters of exhibitions in any other way than grasping for prizes where there is nothing to pay for entrance, merely because their large stocks, with even their miserable growth, enables them to stand a chance against better men who have not so great a choice. The Dahlia, more than any other flower, owes all its advancement to exhibitions. To the early shows are we indebted for the banishment of those monster varieties that would, had they been encouraged, degraded the flower to an apparent worthless weed. To the leading exhibitions do we feel an obligation for the encouragement to produce new varieties, and it is gratifying to see so many of the trade at the head of a central society for promoting the further progress towards perfection of this noble flower.

ROSES FOR WINTER SUPPLY, &c.

A Correspondent in the *Gardener's Journal* states, that for an early supply of flowers, such as will come in when the autumn out-door supply ceases, the Tea-scented, Chinese, and Bourbon classes, are the most suited. These to be followed by the Moss, Provençe perpetuals, and hybrid perpetuals, which are easily managed so as to have a supply all the year round, the forced continuing from the end of November till May, when the out-door ones come in. He states, it is best to have all Roses for forcing to be upon their own roots, not worked on any other kind of stock. The reason is that the former generally throw up one or more luxuriant shoots that bear a fine head of flowers.

The method of management is as follows:—Early in spring the plants of Bourbon, Tea-scented, and Chinese varieties are potted into good sized pots, and as soon as they put forth flowers they are pinched off, and this process is continued till towards autumn. This prevention of blooming during summer induces the plants to throw up strong shoots and strengthens the whole. When frost is apprehended in autumn, the plants are placed in a cool-pit frame; and when requiring plants to force, those are taken that appear to be the most advanced towards bloom.

The above class would afford a supply all the winter and spring season, but in order to have variety, the perpetual hybrid, perpetual Provençe, and Moss varieties, are made to follow; and for a later supply these classes suitably come in. They do not by any means equal the former classes for the earliest supplies.

The perpetuals, Provençe, &c., are treated in spring and summer as is done to the Chinese, &c., but in autumn they are pruned in, kept dry until the time of their being taken in for forcing, when, of course, a gradual supply of water is given. The more rapid the forcing has been, the greater degree of gradual hardening is necessary, as removal at first into a warm part of a greenhouse, and gradually preparing them for a room. The pots when out of doors are placed on ribbed trellises, so that worms are kept out of them. A very free drainage, and a rich sandy loam, are essential to a successful growth.

TO PROMOTE PROFUSE BLOOM IN STOVE AND GREENHOUSE PLANTS.

BY AN OBSERVER.

FROM the commencement of the great floricultural exhibitions in and around London, I have been a constant visitor on such occasions.

Being free from any business occupations, I have had much leisure time, and, in consequence, in addition to attending the meetings above referred to, I have frequently visited the nursery establishments, and nearly all the celebrated collections around the metropolis, each successive year.

In the management of plant culture I have seen a most striking change, not only as it respects the attention bestowed, as at present, on individual plants, but the entire collections too, for although we have magnificent specimens presented at the exhibitions, yet, on visiting the establishments from whence brought, I have found, in all cases, a proportionate uniform advance in cultivation. This improvement has been effected by pursuing the art of treatment on proper principles. The uniform aim of the modern plant growers is to produce the most beautiful specimens in a rich display of flowers, and to exhibit their beauties in the best way. In bygone days, it was the custom to pot all the plants in a collection at the same period; to treat all nearly alike in pruning, soil, water, &c. The general result was an inferior bloom, a most unsatisfactory contrast when pictured with the results of our more enlightened floriculturists. To effect the latter, every plant is treated as a distinct one, which is to be brought to such a state of perfection that it shall be what it is capable of becoming, and be an object of approving admiration by its health, symmetry, and floral beauty.

No lover of plant culture attending the exhibitions, or private as well as public collections in and around London, but must at once see that to realize these particulars the cultivator's constant aim is directed.

In a state of native growth, plants assume a symmetrical form, if they have a due space to grow in; this fact our modern gardeners have endeavoured to copy after, and their collections are not densely crowded together, but each plant is placed so that it has a free circulation of air and light around it; it is, in fact, untouched by another; and although their cultivation in plant structures has to contend with opposition to their retaining a natural position, as when out of doors, it calls forth the skill and attention of the cultivator to realize as near an approach to nature as art can promote it. We therefore rarely see a drawn-up, straggling, misshapen plant, but their native form is aimed at, so that the plant may have a light, easy, free, compact form. This attention is specially directed to the shrubby class of plants, whether they be naturally tall or dwarf, and the stopping of all the principal shoots whilst in a growing state, and which causes the production of laterals, so that a judicious thinning away all above what are requisite to properly form the plant the object of a shape fit to be gazed at, is thus obtained. The stopping of the young growing shoots, too, tends to strengthen and promote the mature fertility of the shoots which are to bear the flowers. This is precisely what is done in the proper management of fruit trees. A summer cutting-in of the shoots contributes to the buds of those portions left to be more perfected, and rendered more fruitful and luxuriant in size. This is just so beneficial in promoting a much greater profusion of flowers, but they are of a superior character too. By stopping the leads, and a proper thinning taking place, not only are weaker shoots strengthened thereby, and the *buds matured*, but any very luxuriant one is checked by stopping, and lateral ones of due vigour are produced. To have, therefore, a profuse display of flowers, this mode of treatment is essential, and success will be certain. How very strikingly do the Ericas, Pimelias, Leschenaultias, Chorozemas, Hoveas, Ixoras, Elichrysums, Boronias, Eutaxias, Thunbergias, and multitudes of other plants exhibited at the shows, exemplify the propriety of this mode of management.

The winter pruning-in of the shoots will not effect the desired object; it is the early summer stopping, by taking off about one-third or one-quarter, at the time the young shoot has arrived at a somewhat firm substance. When that operation is completed, then the portion of the shoots remaining becomes invigorated, and the entire energies of the plant are concentrated in the floral buds, &c. The shoots thus stopped will usually push a shoot or two at the closing part of summer; rub all off but one to each main branch, and pinch it back to about half-an-inch from its origin. If this attention be given, and the plants be potted and re-potted whenever they require it, not waiting for a general removal, &c., also a suitable compost, drainage, water, and air, in due proportion, be afforded, the result will very much more than compensate for the attention.

ON PLANTING HOLLIES.

BY SENEX.

In the November Number of the last volume of this Magazine I noticed an article on planting evergreen trees and shrubs, and was both pleased and profited by some of the observations. A particular reference is made, however, relative to the period of planting Hollies, and with the writer I do not agree. I perceive that the article is communicated by a thirty years' practiced nurseryman; I am not a nurseryman, but a thirty years' practitioner in planting Hollies at various periods of the year, as well as having been an annual observer of the practice of other people with the Holly. The result of my practice and observations as to the best period of planting this much esteemed bush is early in October, and the nearer to that time the greater will be the success of growth, provided no casualty occur to prevent it by lack of due attention in planting, securing, &c. In a recent number of the "Gardener's Chronicle" some extracts have been made from some excellent directions which were published in a small pamphlet by Mr. Macnab, of Edinburgh, on this subject, along with some very judicious remarks by Dr. Lindley.

With the entire I fully concur.

Referring to an early autumn planting of Evergreens, Mr. Macnab says, "Let any one look at the Evergreens in Hillside Crescent, by the side of New London Road from Edinburgh, in front of the house of the Right Hon. William Allan, Esq. They are principally Portugal Laurel, common Laurel, Laurestine, Holly, Alaternus, and Arbutus; they were all planted in November and December, 1824, and even without any watering at the time of planting but from the skies. Of the many thousands then planted scarcely any failed to grow."

Mr. Macnab further observes, "I happened to be at a gentleman's seat in the following July (1825). In the *spring* of that year they had planted 500 Portugal Laurels, and when I saw them at the time named there did not appear to be 100 plants alive, and one-half of them were half dead." There doubtless are many spring seasons so moist as to be more favourable to success than others, and instances occur of satisfactory success in spring planting, or by particular attention in watering over head, shading, &c., it has been realized, but it is very notorious throughout the country that the failures are numerous when planting is effected in spring—more especially in late spring. I admit, too, failures may take place in autumn planting, but they will be rare, except what results from improper treatment with the plants in taking up, long exposure of roots, or planting. I have never failed, I believe, to succeed in growing 95 out of every 100 Hollies I have planted for the last twenty years, and I have had very many thousands put out, but always began to plant early in October, and had the plants watered at the roots at the time to settle the *fine soil* around the fibrous ones; and if the season was very dry I had the tops sprinkled over with water, by means of a water-can, two or three evenings a week, for a short time. I am fully confident if proper attention be given in taking up to retain all the small roots, not to allow the roots to be long exposed to dry or frosty air, choose moist and cloudy weather for planting in, and do all at the proper season, every desired success will result. If a continuance of moist cloudy weather follows all the better, as sprinkling over the tops, shading, &c., is rendered unnecessary.

Hollies are ornamental objects, as well as very useful in shrubberies, which has induced me to send these remarks for insertion in the CABINET.

ISONANDRA GUTTA—THE GUTTA PERCHA TREE.

THIS new tree is a native of the Malay Islands, and has recently been brought into much repute in this country. In its native climate it grows forty feet high, and has a trunk three feet in diameter. It supplies a milky juice, from which a substance is formed, and has recently been made known in this country as a most valuable substitute for leather in forming shoe soles. Of all the discoveries and inventions which have hitherto been brought into notice for the purpose of preserving the feet from damp, nothing is comparable, either in cheapness or efficiency, to Gutta Percha. Persons who have to stand much on the open ground, if they will use this, will find this simple substance exceedingly valuable. The value has been proved during the last four months by the strongest tests, in numerous cases, by gardeners and others, and is most confidently recommended to others. For dryness and warmness to the feet it is said the Gutta Percha soles cannot be equalled. In point of durability it is said to be equal, if not superior, to leather; and it has this advantage, a gardener may give 1*s*. or 1*s*. 6*d*. for a pair of these soles, take them home, dry the bottom of his shoes thoroughly, and, if he choose, himself put the new soles on, and which process will not take him more than a quarter of an hour. The substance can be procured in London, and most probably in most other country towns. It is used for some purposes in this country as a substitute for the Indian rubber. The gum becomes plastic like clay when gradually and thoroughly heated, as for instance, by dipping in hot water till heated through, it may then be moulded into any form; on becoming cold it resumes its hardness, is quite firm, but may be cut with a knife. Mr. Low, of Clapton, has plants of this valuable tree, and Messrs. Veitch, of Exeter, are in expectation of soon receiving some from their collector, Mr. Lobb. Where the article is sold directions for preparing or laying on the soles, repairing, &c., are usually given. The whole of it is very easily accomplished.

ON THE VENTILATION OF GREENHOUSES, PITS, AND FRAMES.

BY M. OF GLASGOW.

I HAVE to preface my intrusion upon you by an acknowledgment of the great pleasure and advantage I have derived from your useful and excellent little work, as a subscriber from its outset. I am satisfied it has tended largely to the diffusion of that taste for floriculture which is universally found to characterize the present day, and which each successive year is largely extending.

I am of that class of subscribers who have had no opportunity of learning the principles of horticulture, except in their own personal and perhaps limited means of experience, and in some particulars (no doubt thought by persons bred to the art of no difficulty) have experienced considerable doubt and hesitation as to the best course of procedure. One, as to which I would now solicit the favour of your information, is the management of heated frames during the winter, particularly in frosty weather. Some well-received authorities recommend the ventilation of such, and greenhouses, by the admission of air to a limited extent at all times. But in regard to frames, heated as mine are by a hot-water pipe, I find that the opening of these, in extremely cold weather, is accompanied by a deposit of damp on the inclosed plants, which is sooner or later productive of the most prejudicial consequences; while, on the other hand, I apprehend that the continued inclosure of the steam which must arise from the greater heat supplied by the water-pipe within, must be scarcely if less prejudicial. Now, what is the proper treatment of frames or pits, and greenhouses, in such cases? Are the covers or sashes in the case of a continued frost to be kept covered, to entire exclusion of the cold air; or, if it be proper to admit the air, seeing it immediately sets down in the shape of dew or heavy moisture on the plants, how is it to be dealt with?

I am satisfied that a few distinct and practical remarks on the above subject will prove eminently useful to many of your subscribers; and I very respectfully solicit from some reader of experience in this matter a detail of management at an early opportunity.

THE CULTURE OF PHLOX DRUMMONDII.

BY J. G., M.R.A., PERTH.

I AM a great admirer of that beautiful annual Phlox Drummondii, and having succeeded in growing it to much greater perfection than either I, or any of my neighbours, have hitherto seen it elsewhere, I have ventured to describe my mode of treating it, in the hope it may prove interesting and useful to some of the readers of the CABINET.

I sow the seed about the beginning of April in a slight hot-bed, and when the plants are in the rough leaf I prick them out into small pots (two or three together), and gradually harden them off ready to plant out by the first of June.

I prepare the bed by removing the old earth to the depth of a foot or fourteen inches, and refilling it with rotten turf mixed with a little sand. This last season into a bed (six feet by four) so prepared I put twenty plants, which were all I had, and by the first of August the bed was completely covered with a dense mass of flowers, which continued to bloom profusely up to the middle of November, and even yet, December 10, although we have had severe frosts and much coarse weather, a respectable nosegay may be gathered from it. When planting out I am careful to preserve a good ball at the roots, and I water freely till the plants are well established in the bed. I have always been told by gardeners hereabout that P. Drummondii is "a *dorty* thing to grow," but whoever will be at the trouble of cultivating it in this way will find it one of the most vigorous, as it certainly is one of the most beautiful, annuals we have.

CULTIVATION OF BRUGMANSIA SANGUINEA.

BY MR. JOHN FOSTER, AMATEUR FLORIST, OF PARKSIDE.

THREE years ago I turned out into a bed at the inside end of my greenhouse a nice plant of Brugmansia sanguinea, which bloomed beautifully the first season, and grew very rapidly. Early in the spring of 1846 I pruned it in, it soon pushed and it soon flowered. By this time it occupied so much space as to be intruding on other plants; as soon as the flowering ceased I cut back the larger portion of the shoots, and the parts left soon pushed forth numerous shoots. I rubbed off all but one on each lateral branch; they grew fast, and in August I had a second profusion of flowers, which continued in bloom till the end of October. In order to make room I cut the plant in again, and at Christmas it was finely in flower, and continued till March, thus blooming three times within the period of twelve months. The same mode of treatment I pursued in 1847, and with the same success. I intend to try the same treatment with the B. Knightii and Arborea the next season. Their continuous beauty nearly all the year most amply repays for any attention. A couple of plants of a sort being pruned at different times would thus provide a constant bloom. They would succeed quite as well grown in pots, having attention in repotting each time into a larger pot.

TORENIA ASIATICA.

BY MARY M—T.

LAST summer I raised a considerable number of these plants. I turned out into several small beds in the open air a hundred of them. This was done rather late, viz., the first week in July. The change from the stove to the open air, caused the plants to assume a healthy colour, but by the middle of August they had not only started into fresh growth but gave promise of a profuse bloom; this they displayed up to the middle of October, and being pegged down to the ground they formed a lovely carpet of flowers. I carefully took up a quantity at the time just named, potted them and placed them in a gentle warm pit near the glass, and by proper attention, they have continued to bloom very freely and most beautifully from November to the present February 16th in my greenhouse upon the front shelves, where I brought them as soon as they began to expand a flower. It is one of the most lovely winter ornaments. The plant delights to be kept near the glass, and to have an open sunny aspect, not to be kept in the shade.

ON PANSIES.

BY AN ADMIRER.

I HAVE often procured Pansies, with an intention of obtaining what I hoped would be of approved form. The mode of selection was regulated by their being the newest and highest priced, but after all I have not obtained more than six varieties of what I deem good form. I wish the Editor of the CABINET would give us a list of about a dozen, or two dozen, that are deemed a near approach to perfection in an early number.

[The application is too late for this number. We will give a descriptive list in our next of a few we know to be good. In the mean time purchasers had best stipulate to have only such kinds as are of approved character, as by the now generally admitted standard, viz., a perfect circle, smooth on the edge; petals thick; velvety texture; marking uniform; top petals alike; side petals alike; the general colour on the three lower petals the same, and the eye must not break through to the margin. Order only such to be sent and none others.]

VERBENA SEED.

BY R. R.

LAST autumn I saved some Verbena seed, how am I to succeed in raising plants? I once tried and failed. I shall be obliged by instructions being given in the March CABINET.

[Have a compost of equal portions of good loam and leaf mould, with a small addition of silver sand. The pots or pans should have a free drainage. The surface soil must be finely sifted, be made even and smooth. Sprinkle the seed regularly, and sift evenly over it some fine sandy compost, only as much as will just cover it, after which just press it even over the surface. The pots or pans must be placed in a hot-bed frame or similar moist temperature, and the soil being kept just moist the plants usually appear in a little more than a fortnight. As the plants progress inure them gradually so as to be able to pot them singly as early as can be, and then they may be planted out into the open beds at the usual period early in May. They bloom well the first season.]

ON BENTHAMIA FRAGIFERA.

BY AN AMATEUR.

In one of the numbers of this Magazine for 1847 I noticed some interesting remarks on the above-named plant. When I saw the fruit figured in the Cabinet twelve years ago, I applied for a plant in Cornwall and obtained one. It was planted in the open air in a warm situation near to my dwelling, and is now twelve feet high and as much in diameter. For six years it has borne a profusion of its large strawberry-like fruit, and the beautiful bright rosy and white tints produce a most lovely appearance. Every shrubbery ought to have so handsome an ornament in it. It is sold cheap, grows very quickly, and forms a very neat plant.

PERSIAN YELLOW AND CLOTH OF GOLD ROSES.

These beautiful Roses do not require the severe pruning which the generality of Roses do, but by the following method they succeed admirably.

The plants should be trained to a warm aspected wall, as is done to Peach trees, &c. The young wood must be thinned out in summer, and a proper proportion laid in. At the end of summer, any weakly shoots should be cut clean away, or if future wood in such place be required, cut back so as to leave one bud. The other shoots, which are those to supply bloom the following season, should only have the tips taken off. I have several plants of each of the above, that during the last season bloomed most profusely.

PROPAGATION OF ANEMONE JAPONICA.

I had a small bed of this plant in my flower-garden which have bloomed profusely during August, September, and nearly to the end of October. It proves to be quite hardy too, and forms a beautiful bed of its rosy-crimson flowers. An accident occurred with a plant having the head and the crown of the root broken off in the beginning of September. Subsequently, my gardener applying some leaves over the surface of the bed for winter protection, he found a great number of young plants had issued from the roots of the plant, which, by digging over the bed, had been severed into numerous pieces, and each piece, even those that had been cut an inch long, having an eye, had pushed. The entire were taken up and potted, and now are nice plants. At the time the roots that had pushed shoots, my gardener cut the other long parts into pieces about an inch each, and placed them in pots, just covering with fine soil, and put them in a gentle forcing house, and every portion has pushed. This lovely plant may be possessed readily for beds and will form one of the loveliest ornaments for autumn.

THE LUCULIA GRATISSIMA.

BY MR. F. THORNE, OF TOTTENHAM PARK GARDENS, IN WILTSHIRE.

HAVING, some few weeks ago, paid a visit to the Royal Gardens of Kew, at which place I was delighted in seeing a most magnificent plant of the Luculia gratissima; I also, about the same time, saw a fine specimen in the Horticultural Gardens at Chiswick, where it was finely in bloom, and to all appearance it would continue flowering throughout the greatest part of winter, which makes it still the more valuable. This plant is well known to produce heads of bloom similar to the Hydrangea, but it has the advantage over the latter in colour and in the sweet scented properties it contains. If this admirable plant was more known I believe it would soon be almost universally cultivated. Every collection of greenhouse plants ought to possess a few of them, as it is one of the best plants for winter decoration, and I think there is not an equal to it.

I have heard some gardeners say it is a very difficult thing to grow; if properly managed, however, it is as easily grown and propagated as a Pelargonium, with one exception, viz., that is in damping off, to which it is very subject, at all times it ought to be supplied with water very cautiously. For many years this plant has been grown in the stove; however that structure is not a proper situation for it, it will thrive much better in the warmest part of a greenhouse, as it does in the Horticultural Society's garden, where it is planted out in the great conservatory border, and grows most luxuriantly. I took the dimensions of one head of bloom, which measured nearly a foot in diameter.

Cuttings may be taken off after the flowering bud is formed and struck in small 60-sized pots, they flower beautifully in this way. If there is a plant to spare in the month of February, place it in a gentle heat, and in a few weeks after it will produce plenty of young wood for cuttings, which may be easily struck in peat mould and silver sand. The main particular to be attended to is to strike them as early in spring as the cuttings can be obtained, in order to produce good stocky plants for winter use the following season. By having about a dozen of these plants judiciously managed, and grown in 32-sized pots, they will afford a constant succession of bloom from the end of October until the end of April. When the plants have done flowering they ought to receive a gentle rest for a few weeks previous to being again excited. When they begin to make a growth I prefer subjecting them for a few weeks to a warm vinery and underneath the vines. As the tender foliage is very apt to become burnt when fully exposed to the sun, when the wood is perfectly matured, which will take place in July or August, then harden them off gradually, and place the plants in a shady part facing the north, where they will form their flowering buds effectually. Be cautious in having them placed in the greenhouse before the cold nights of winter arrive, and in that situation let them remain until introduced for early flowering. The green foliage of these plants change to a brown appearance in a short time after exposure, however this does not injure it, for it will soon resume its former hue when again placed in a gentle heat.

CINERARIAS.

BY FELIX.

These charming ornaments for the spring should be repotted as frequently as the pots get filled with roots, and they rapidly fill. I am an exhibitor at the London shows, and the following attention is paid in repotting: the ball is kept entire, a free drainage given; I use turfy sandy peat, turfy loam, leaf mould and old rotten dung, in equal parts, well chopped up together, not sifted. A regular attention to watering and tying up, and admirable success is realized.

APPLICATION OF GUANO TO CHRYSANTHEMUMS.

BY L. R.

Up to the present year I have been most successful in blooming Chrysanthemums, attending carefully to their training, and frequently watering them with liquid manure. Observing one of your correspondents in the May number recommended Guano, I determined to try it, and this year, in August, I commenced watering once a week with a weak solution. The plants continued to thrive most vigorously, presenting a bushy and healthy appearance, with a prodigious number of buds, many of which were taken off to strengthen the plants, and enable them to produce larger flowers; they were removed to the greenhouse early in October, and promised well for a splendid show of flowers, but on many of the plants, as the buds expanded, they nearly all turned out imperfect, infected with some blight or disease. No insect is apparent, though the flower has only a few of the petals the proper colour, the rest being a mass of minute green ones that do not expand. The foliage is perfectly healthy, and the plants appear in a luxuriant state; they were cuttings in May from a good sort, have been kept free from insects, and stopped at the proper time to produce lateral shoots. Feeling exceedingly mortified at the result of the experiment, I deem it a duty to give these particulars, to guard other persons against a similar failure.

ON A BARK PIT.

BY A YOUNG GARDENER.

A subscriber to your valuable periodical would feel much obliged by hints from some of your numerous correspondents on the best management of a bark bed; his efforts hitherto have been attended with great uncertainty, weeks having sometimes elapsed before any heat has been procured, at other times none whatever has taken place. The pit is about nine feet from back to front, fourteen long, and eight deep; the quantity of tan he has been in the habit of putting in about three waggon loads.

FLORAL OPERATIONS FOR THE MONTH.

IN THE FLOWER GARDEN.

PROCEED without loss of time to complete all necessary alterations in this department, such as removing shrubs, planting edgings, laying turf, cutting the grass edges of walks, &c. Shrubs requiring increase by layers may be done now, in a similar way to the Carnation; some of the tough-wooded kinds do well by having the branch twisted at the part where the cut in laying would have been made. All perennial and biennial border plants which it may be desirable to increase should be parted at once. Where they have spread out large, the most ready way is to divide them with a spade into as many pieces as are wanted. Add fresh loam, leaf-mould, rotten dung, &c., to beds, before sowing seeds or replanting. Now is the time to decide upon some arrangement of plants for the beds of the flower garden, in order to give plenty of time to prepare a stock of those required. Hardy annuals, to bloom early in the summer, may be sown in sheltered situations. Cover them with finely sifted soil, and press it gently down on the seeds. Finish pruning Roses. Take especial care to be providing plants of every class required for bedding out on lawns, flower gardens, &c., in April or early in May. No delay must be allowed. German Asters, Geraniums, &c.

FLORISTS' FLOWERS.—At this time *Auriculas* and *Polyanthuses* that were top-dressed in proper time, and since received due attention, will have commenced growing. Admit air on all favourable occasions, to prevent them being drawn. Where increase is not particularly required, it will greatly strengthen the bloom by removing all side shoots as they appear. Give every attention, to maintain the plants in vigour. Manure water should be given once a-week, taking care it is not poured upon the foliage. Sheep's-dung, put into a tub, and soft water poured upon it, in quantity so as it forms a strong liquid, is very serviceable. The dung must be collected for a few weeks before using. Old cow-dung will also answer the same purpose. If any appear too forward in showing bloom, it is best to leave them to take their chance of being in condition when wanted. Checking is almost sure to induce small and uneven flowers. Sow seeds of the above.

Anemonies and *Ranunculuses* must be finished planting immediately. If no bed has been prepared for them, it may be made by taking out the soil to the depth of fifteen or eighteen inches, and replacing it at the bottom with a layer three or four inches thick of cow-dung, and filling up with soil composed of decayed turfs taken from a loamy pasture. The mode of planting is in drills, and to press the tubers down, so that they rest firmly, drawing the soil over them to the depth of two inches. The arrangement of the varieties is purely a point of taste; some, when they are for exhibition, keep each sort to itself, ir rows, across the bed. The only advantage of this is that the best blooms are more easily selected. Such as were planted in the autumn will now be making their appearance above ground. It is very necessary to keep the soil well round the crown of the plant; when this is neglected the bloom suffers. Should the weather be severe, protection will still be requisite. *Tulips* require continued attention, as directed last month. Any that happen to be affected with canker will appear sickly; the roots should be examined, and the damaged part cut clean out. If left exposed to sun and air, the parts will soon dry and heal. Avoid frosty air getting to the wound by exposure. If by any casualty they get frozen, then, early in the morning, sprinkle the tops over with cold water, and keep them covered over for an hour or so before they be exposed, as the sun must not be allowed to shine upon them until the frost is all out. *Carnations* and *Picotees* may, at the end of the month, receive their final shifting. The pots known as No. 12's are the size usually employed. In potting, place at the bottom two inches deep of crocks, to give free drainage. Use a compost—which is best if it has been previously prepared and become well incorporated together—of these proportions: two barrows full of fresh yellow loam, three of well-rotted horse-dung, and half a barrowful of river sand, well mixed; plant in it *without sifting*, but breaking very well with the spade. Place the plants in a sheltered situation out of doors, and let them be carefully looked after. All those not required for potting plant out in rows in a bed, each plant being a foot apart in the rows, and two feet from row to row. Where frost has disturbed the roots of *Panseys* in beds, they should be pressed into their places, and a top-dressing of rich mould given to them, all over the bed. In forming new beds the plants should be placed six or eight inches apart, and the situation where they can have all the benefit of free air. Plants in pots, under glass, will require shifting into larger sizes, for as this is the period when they begin to grow, they will soon become weak, and bloom out of character, if confined in small pots. If beds of *Pinks* were not planted in autumn, at the end of the month they may be. In removing the plants, whether out of pots or open ground, be careful to retain all the ball of roots, and as uninjured as possible. For the open bed use a trowel for removing with. When planted, water, to settle the soil around the roots. *Hyacinths* in beds ought to have protection from sharp frosts, and on fine days the surface soil should be stirred over occasionally.

IN THE FORCING FRAME.

Sow seeds of any tender and half-hardy annuals that have been omitted, and introduce them here. Such as have been sown, and are up, should have all possible air given, to prevent their being drawn. In watering, it must not be over the tops, or many of the sorts will be rotted by it. The best method is to flood over the surface of each pot, always using tepid water. Annuals sown in frames—*Cockscombs*, *Balsams*, *Thunbergias*, &c.,—if large enough to pot, should be done in 60-sized pots.

Sow seeds of *Dahlias*, *Fuchias*, *Petunias*, *Verbenas*, &c., as soon as possible; cover them lightly with fine sandy soil, and press the surface smooth with a piece of flat board. Seeds of most greenhouse plants will do well if sown now. *Dahlia* roots, brought in last month, will have began to push shoots, which, when about three inches long, should be taken off, cut close under a joint, and struck in sand. Continue to put in cuttings of all kinds of plants intended to bed out. Re-pot and forward *Amaryllises*, *Gesnerias*, &c., as directed last month. *Ipomeas Echites*, and similar plants, may be trimmed in, disrooted where necessary, and brought here to excite early growth.

IN THE GREENHOUSE AND COLD FRAME.

Continue to admit all air possible. Re-pot the various inmates as required from time to time, and examine to see that the drainage is free. If any of the soil looks black and wet, and the pot feels heavy, there is something wrong. If any of the pots are too full of roots, the plants should be removed into pots a size larger; and the soil should be rich, light, and moderately porous. There is a soil which is good for almost every kind of greenhouse plant—loam, with the turf rotted in it, decayed cow-dung, leaf-mould, peat-earth, chopped small or rubbed through a very coarse sieve, and road-sand, equal quantities of each; it will do for everything; but if we had Heaths to grow, we should treble the quantity of peat-earth, and not alter the others, so that it would be one of each of the others and three of peat-earth, instead of one all round. In moving a plant from one pot to another take care that the plant be not sunk in the least more in the new pot than it was in the old one, and see that the compost, well mixed up, is made to go down very nicely all round the old ball of earth. Plants shifted in this way should have a little water to settle the earth to the roots. All the shelves of the greenhouse, and all the plants, should be cleared of dead leaves, and the places kept very clean.

Calceolarias, *Verbenas*, *Petunias*, and other young stock, intended either for decorating the flower garden or to bloom in pots, must, as growth advances, have the shoots stopped, which will cause them to be bushy. *Fuchsias* require similar attention, forming cuttings of the young shoots, if desired.

Camellias exhausted with flowering should now receive a little extra attention. Our practice is to remove them to a cooler situation for three weeks, on the principle of slow breaking, and to give the root a chance of overtaking, in some degree, the expenditure which has taken place in the system. Any pruning necessary is performed at this juncture; no plant can succeed better, after judicious pruning, than the Camellia.

See that Lilium speciosum, &c., are not saturated by watering. Let the Azaleas be re-potted, if required, and they must be pushed on by additional warmth; an increase of pot-room contributes to vigour.

IN THE STOVE.

Successive introductions of plants for early bloom should still be attended to, as directed last month. See to pruning in such creepers as are overgrown, before fresh growth commences. Complete all potting as early as possible. Orchidaceous plants, especially, should be done at once, in order to obtain as early a growth as convenient. Use plenty of charcoal, in lumps, and keep plenty of indestructible material round the outside of the pots, to facilitate the passage of both air and moisture with rapidity. Increase atmospheric moisture in proportion to heat and light. Look sharp after insects; the snails, &c., are very fond of the young buds at this period, and soon cause great injury. Orchids recently imported should have a warm and constantly moist atmosphere for a few weeks, until they begin to grow, but no water should be applied to them until that period, and then with moderation. They will fill their pseudo-bulbs by atmospheric moisture alone, and all excitement otherwise risks the well-being of the plant.

ON PLUMBAGO LARPENTÆ.

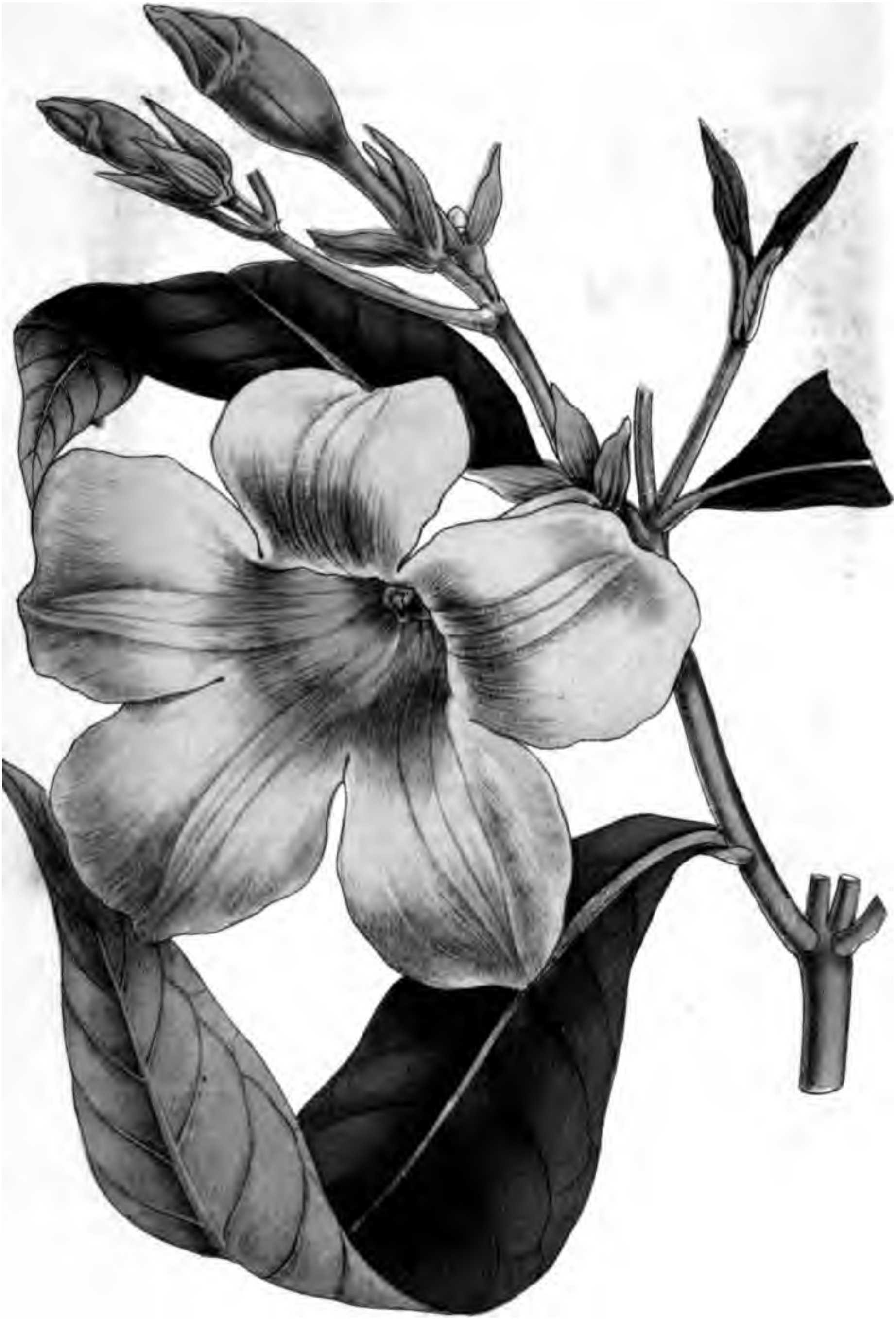
A SUBSCRIBER would be obliged to the Editor to inform her in his next number of the CABINET where seed of Plumbago Larpentæ is to be had, and if plants can now be purchased, and the price of each.

[If the plant has produced any seed in this country none is offered for sale. We shall be able to supply plants immediately the proprietors of them let it be sent out. The price we will give as soon as we are informed at what it is fixed; we expect it will be very reasonable.]

BRIEF NOTES AND CORRESPONDENCE.

Floral Rarity.—"We had the pleasure," says the *Glasgow Herald*, "the other day, of visiting the conservatory of the garden at Ibroxhill, where are to be seen many beautiful specimens of the Cactus tribe, covered with blossoms to the number of several thousands. Of the various specimens which adorn the walls and shelves of this elegant conservatory, that of the Epiphyllum truncatum is the most remarkable for the number and brilliancy of its blossoms. Last year about this period the plant bore 6000, and this season the number has been nearly equal. The Epiphyllum is of dwarfish growth; but, in order to set it off, it is grafted on Speciosissima, another plant of the same tribe, and one of these measures six feet in height and sixteen in circumference. A plant of C. speciosissima is trained on the wall of the conservatory, and covers a space of 180 square feet. In the month of July last this plant bore fifty blossoms at one time. We learn that Mr. Wardlaw, gardener to Mrs. M'Call, was the first that cultivated the Epiphyllum upon the above principle, having commenced it a number of years since, and devoted himself to it with equal zeal and success. Mr. Macnab, of the Edinburgh Botanic Garden, hearing of the success which had attended Mr. Wardlaw's efforts in the cultivation of this plant, visited Ibroxhill recently, and expressed himself astonished and delighted at witnessing the many beautiful specimens which adorn this conservatory. One pleasing feature in the conservatory is the scrupulous care and attention which appears to be paid to its cleanliness. Mr. Wardlaw seems to be impressed with this wholesome truth, that pure air is as essential to the health of the plant as of man, and the floors of the conservatory, as well as the pots, containing a very numerous collection of plants, are the very beau ideal of cleanliness."

[We should be very much pleased if the worthy cultivator, Mr. Wardlaw, would favour us with a statement of his mode of cultivation.—CONDUCTOR.



Allamanda Schottii.

APRIL, 1848.

ILLUSTRATIONS.

ALLAMANDA SCHOTTII.

LARGE-FLOWERED ERECT ALLAMANDA.

THIS fine species has been introduced from Brazil. Seeds of it were sent by Mr. Graham to Messrs. Barton, of Springwood, near Manchester, where the plant bloomed last autumn. It is an upright, suffruticose, stove plant, and blooms profusely when not more than two feet high. It is one of the loveliest hothouse plants that has been received into this country. The stock at Springwood was procured by Messrs. Lucombe, Pince, and Co., of Exeter; by them offered for sale, from whom we received it, and can supply to others. It ought to be in every collection.

NOTES ON NEW OR RARE PLANTS.

ACHIMENES OCELLATA—EYELETTED ACHIMENES.

Gesneriaceæ. Didynamia Angiospermia.

A very ornamental plant, of strong upright habit, growing from one to two feet high. The stems are of a dark purple colour, and covered with appressed hairs. The leaves are opposite, ovate, acuminate, deeply veined and reticulated, roughly serrated on the edges, from four to five inches long, of a deep glossy green above and purple below. The flowers are produced solitary, in the axils of all the leaves near the termination of a branch, and supported on slender, erect, red footstalks, from two to three inches long. The tube of the flower is campanulate, about three-quarters of an inch long, pubescent, and of a very rich red colour. The mouth expands into five small, rounded, nearly equal segments, which are beautifully dotted with black, the dots being surrounded with a small light-coloured ray. It was introduced from the Isthmus of Panama, by Mr. Seemann, Government collector and naturalist of H. M. S. Herald. Plants, derived from this source, have been in bloom during nearly the whole of the past winter, in the Royal Gardens of Kew, where we had the pleasure to see it. In all likelihood it will be found to flourish best in a cool greenhouse during summer, where the rich colour of its blossoms will render it an attractive object. (Figured in *Bot. Mag.*, 4359.)

ÆSCHYNANTHUS LONGIFLORUS—LONG-FLOWERED ÆSCHYNANTHUS.

Gesneraceæ. Didynamia Angiospermia.

A splendid epiphytal, evergreen, stove plant. The stems are trailing, stout, and emit roots at all the joints. The leaves are opposite, broadly lanceolate, acuminated, fleshy, from four to five inches long, and of a deep shining green colour. The flowers are disposed in terminal fascicles of ten to twelve in each. The calyx is deeply cut into five linear-subulate segments, in colour green, with a purple tinge at the ends. The tube of the corolla is nearly four inches long, of a rich deep crimson colour; the limb is also crimson, marked by an irregular black band, and is divided into four rounded segments, the upper one bifid. Messrs. Veitch, nurserymen, Exeter, received this very showy plant from their collector at Java, Mr. Lobb, marked "Lysionotus longiflorus," by which name it was some years ago recorded as growing abundantly on old trees in dense woods in the provinces of Tjanjor, Buitenzorg, and Bantam. It is said to bloom freely, in which case it will prove the most gorgeous of all this truly beautiful tribe. (Figured in *Mag. Bot.*)

ARISTOLOCHIA ANGUICIDA—SNAKE BIRTHWORT.

Aristolochiaceæ. Gynandria Hexandria.

A curious and rare climbing plant, with very slender striated stems. The leaves are produced rather distant, from two to four inches long, cordate, acuminate, entire, the sinus at the base being deep. The flowers are produced from the axils of the leaves, on footstalks nearly two inches long, solitary, and bear some resemblance in form to the European *A. clematitis*, but the colour is altogether different, being almost white, streaked and reticulated with brown. It was discovered by Jacquin, at Carthagena, who states that the natives of South America use "the juice of the root, mixed with saliva by mastication, to render powerless a serpent of moderate size; if one or two drops are put into the mouth of the creature, it may be handled for several hours, and put into the bosom with impunity; but after a time the animal recovers; a larger quantity, however, occasions its death." (Figured in *Bot. Mag.*, 4361.)

CUPHEA SILENOIDES—CATCHFLY CUPHEE.

Lythrarieæ. Dodecandria Monogynia.

A pretty little branching, hardy annual plant, growing about a foot high, and almost covered with short spreading hairs, which have their tips imbued with a viscid gland. The leaves are opposite, nearly an inch long, lanceolate, obtuse. The flowers are produced singly from the axils of all the upper leaves, forming a kind of leafy raceme. The calyx tube is about an inch long, having elongated furrows, very hairy at the mouth, and of a red colour. The petals are fine, rotundate, spreading to near an inch across, the two upper being double the size of the under ones, and have a lilac margin, the rest being entirely deep blood-purple colour. It is a profuse blooming plant, and very useful in the flower-garden. It is a native of Mexico. (Figured in *Bot. Mag.*, 4362.)

OROTHAMNUS ZEYHERI—MR. ZEYHER'S OROTHAMNUS.

Proteaceæ. Tetrandria Monogynia.

This is a large and showy Cape Proteaceæ, but of which no living specimens have yet been introduced to this country. It was discovered lately by the person whose name it bears, growing in marshy places, on the summit of Hottentots-Holland Mountains, and according to the description furnished to Sir William Hooker by Dr. Pappe, it forms an erect, branching shrub, growing from six to eight feet high, and blooming in July. The extremity of each branch is crowned by three or more drooping bracteated flowers of rosy-red colour. (Figured in *Bot. Mag.*, 4357.)

PRIMULA STUARTII—STUART'S PRIMROSE.

Primulaceæ. Pentandria Monogynia.

An exceedingly pretty perennial herbaceous Primrose, growing about fifteen inches high. The leaves are ten or twelve inches long, broadly lanceolate, acute, erect, quite smooth on the surface, closely serrated on the edges, of a glossy green above, and entirely covered below with a yellowish mealy farina. The flowers are of a clear pale yellow colour, with an orange tint near the centre, and about three-quarters of an inch across. Each umbel is numerously furnished with blossoms. It is indigenous to the various mountainous parts of India. Dr. Wallich mentions having found it in Nepal, and Royle speaks of it as giving a rich yellow glow to some of the Himalayah regions. It bloomed during last summer in the Edinburgh Botanic Garden. (Figured in *Bot. Mag.*, 4356.)

SATYRIUM AUREUM—GOLDEN-FLOWERED SATYRIUM.

Orchidaceæ. Gynandria Monandria.

A handsome half-hardy perennial orchid. The leaves are broadly ovate, obtuse, and many-nerved. The flower spike rises six inches high. Each flower is half an inch or more across, the sepals and petals are bright yellow, the labellum is helmet-shaped and of a distinct rich orange colour. It was introduced a few years ago, from the Cape of Good Hope, by Messrs. Young, of Epsom, and is a desirable plant for the cultivators of this interesting tribe. (Figured in *Mag. Bot.*)

SIDA (ABUTILON) INTEGERRIMA—ENTIRE-LEAVED SIDA.

Malvaceæ. Monodelphia Polyandria.

A large stove plant, or small tree, much branched, growing sixteen feet or more high. The leaves are large, supported by long footstalks, orbicular-cordate, and perfectly entire margin. The flowers are produced solitary, from the axils of the superior leaves, and are from three and a half to four inches across, of a rich yellow colour, and very showy. It has long been an inhabitant of the Kew Gardens, but whence it was received there is no record to show. It is considered by Sir William Hooker to be a native of New Grenada. It blooms in May, and is one of the most ornamental of the genus. (Figured in *Bot. Mag.*, 4360.)

NOTES ON FLORISTS' FLOWERS.

NEW PHLOXES.

Imperialis.—This is a beautiful variety, raised by M. Miellez, of Lille. The flowers are of very large size, flat, even, and of excellent circular form. The colour is clear white, spotted and striped with lilac.

Rodigazi.—This is stated to be unquestionably the finest striped Phlox yet raised. The flowers are clear white, with decided rosy-purple stripes, very uniform and beautiful. The flowers and trusses are large and compact.

VEGETATION OF THE ORGAN MOUNTAINS.

From a most interesting and instructive work lately written by Mr. Gardner,* the well-known botanist, on his travels in Brazil, we give the following entertaining account of his visits to the Organ Mountains in search of new plants:—

"We entered," says Mr. Gardner, "the forest at about a mile to the north of Mr. March's house, and our road for that day was nearly due west. Two years before, an English merchant from Rio ascended, from mere curiosity, to within a few hundred feet of the summit, guided by the same old black who accompanied me. For the first few miles we were able to keep the road which he had made, but, from the rapid growth of the bamboos and underwood through which it had been cut, it was as difficult to force our way as if no path had ever been made. Our progress was but slow, it being necessary for one of the blacks to go on before in order to cut a pass. Some of the bamboos were of immense size; I measured several about six inches in diameter, and their height could not be less than eighty or a hundred feet. The internodes are generally filled with water, obviously secreted by the plant itself. Prince Maximilian, in his travels, speaks of this fluid as forming a most delicious beverage to hunters and others in the woods. I have frequently tasted it, but always found it so nauseous that the most urgent thirst alone would compel me to drink it.

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* Travels in the interior of Brazil, principally through the Northern Provinces, and the Gold and Diamond Districts, during the years 1836-1841. By George Gardner, F.L.S., Superintendent of the Royal Botanic Gardens of Ceylon. London: Reeve, Benham, and Reeve.

"Near the entrance of the wood we passed a large species of Copaifera, the lower part of the stem of which had been pierced, for the purpose of obtaining the balsam which those trees exude. For miles our route lay nearly parallel with a small river, along the banks of which grew some very large trees; among them I observed a species of Laurus, and another of Pleroma, both in flower. The underwood consisted of a great variety of shrubby Melastomaceæ, Myrtaceæ, Rubiaceæ, and suffruticose species of Begonia. In other places elegant tree-ferns abounded, their stems often covered with little delicate species of the same tribe, or air-plants bearing beautiful flowers. Pretty herbaceous Ferns and handsome-flowered Begonias were trodden down at every footstep. The stems of the large trees were covered with Bromelias, Tillandsias, Orchideæ, Ferns, and a climbing species of Begonia. Occasionally a large plant of Cactus truncatus was to be seen hanging from rocks or from the stem of some large tree, covered with hundreds of beautiful pink blossoms. In crossing over a hill about five hundred feet high, which stands in the valley we were now passing through, I found the top of it literally covered with various kinds of orchidaceous plants, but with the exception of the beautiful little Sophronites grandiflora, which was then in flower, all had been previously met with at a lower elevation. It was here likewise that I first met with Luxemburgia ciliosa, a fine shrub, producing large corymbs of lemon-coloured flowers, and belonging to the Violet tribe. On this hill I likewise observed two kinds of bamboo, different from the large kinds in the woods below. One of them had the internodes considerably shorter in proportion to the size of the plant, and was altogether much smaller. The other species was still less, its stem not being more than half an inch in diameter, but continuing of that thickness to a height of fifteen or twenty feet. The getting through these was the most difficult part of our day's journey. At four o'clock, P.M., we reached a place by the side of a small stream, where I determined to remain for the night; and while the blacks were occupied in cutting wood for a fire and in preparing dinner, I took a walk up the course of the little stream. As I estimated this spot to be at an elevation of about 4,500 feet, I naturally expected a vegetation different from that in the valley below. The first plant that attracted my attention was what I imagined to be a fine individual of Cereus truncatus, in full flower, hanging from the under-side of the trunk of a large tree that was bent over the stream, but, on getting possession of it, it proved to be a new, and, perhaps, a still more beautiful species. I have named it Cereus Russellianus, in honour of his Grace the late Duke of Bedford, one of the most liberal supporters of my mission to Brazil; it has since been introduced to the hothouses of England. A little way further up the stream, by the side of a small waterfall, and on a slanting bank near it, grew great abundance of a fine dark red-flowered Amaryllis. This spot is one of the most charming I have ever seen. The bed of the stream is about ten feet broad, but it is only during heavy rains that the water covers this space; at this time the stream was little more than perceptible. The water falls over three successive shelves of granite, each about eight feet high, the faces of which are covered with mosses. Along the stream at the bottom of the fall there are several middle-sized trees, the branches of which are festooned with the long branches of a Fuchsia, loaded with splendid crimson flowers. By the side of a fall there are several bushes of a large flowered Pleroma, and, along with them, a few of a red-blossomed Esterhazya, and a broad thick-leaved species of Clusia (C. fragrans, Gardn.), loading the atmosphere with a delightful odour arising from its large white blossoms; beneath these grow the Amaryllis, an Eryngium, several Tillandsias, and many Ferns. Having gained the upper part of the fall, I found a space, extending to a considerable distance on each side and for some way up the mountain, destitute of trees—nothing but bare portions of rock, with occasional masses of low shrubs and herbaceous plants. Among the orchideæ, the beautiful Zygopetalon Mackaii, and the odoriferous Maxillaria picta, were not the least common. Darkness now beginning to set in, I returned to the encampment, where I found a large fire lighted; the evening was so fine that I considered the erection of a hut unnecessary, and lay down about 8 P.M., on a few palm leaves by the fire, with my Poncho round me, to pass the night.

"When I arose next morning at day-break, I found the thermometer at 46°. While breakfast was preparing, I again went out to botanize, but added little more than a few Ferns to my collection of the previous evening. Our journey to the place where we slept was of very gradual ascent; we had now to commence the ascent proper of the peaks.... After half an hour's hard work, we reached a comparatively flat wooded spot. On the steep part I collected, in moist places, an Eriocaulon, a small Sun-dew, and a new genus belonging to the Gentian tribe; among these grew also the curious Burmannia bicolor. In passing through the wood above mentioned, I saw plenty of my new Cactus growing on the stems of the larger trees, whilst the rocks were covered with Gesneras, and different kinds of orchidaceous plants. Emerging from the wood we encountered another steep rocky place, almost entirely covered with a large pine-apple-like Tillandsia, above which rose a few plants of a fine large scarlet-flowered shrubby Salvia (S. Benthamiana, Gardn.), and a pale-blossomed Virgularia; on a nearly bare portion of the rock grew several patches of a large herbaceous plant, belonging to the tribe of the Gentians; it grows from a foot to two feet high, with thick succulent glaucous leaves, the upper ones connate, and from out of which proceed about half a dozen pedicels, each bearing a single large flower, the calyx of which is much inflated and tinged with purple; it is the Prepusa connata, Gardn. The only previously known species was found by Martius, on a large mountain range between the Diamond country and Bahia; a third was afterwards discovered on the very summit of the Organ Mountains. Passing this place, we again entered a wooded tract, where we found many Tapir paths, as we had also done the day previous in the woods through which we passed, which rendered our progress much quicker than it otherwise would have been, as the branches above only require to be cut away to make a good road. Judging from the abundance of the tracts which we here met with, the Tapir must be a very common animal in this remote and solitary part of the mountains; here they are as yet out of the reach of the hunter, who commits great havoc among those which inhabit the lower woods, and there is also abundance of herbage to supply them with food. In passing through this wood, one of the blacks shot a Jacutinga (Penelope jacutinga, Spix), and I collected specimens of a few orchideous plants, and a large yellow-flowered Senecio.

"Leaving the wood, we came upon a slanting Sphagnum bog, in which grew some very alpine-looking shrubs; these consisted chiefly of a Proteaceous-like Baccharis, a Vaccinium, an Andromeda, the Lavoisiera imbricata, remarkable for its large flowers and small leaves, and a Pleroma; among the moss, an Eriocaulon, and a handsome Utricularia, with large cordate leaves and purple flowers, grew in the greatest profusion. Judging from the top of the mountain, we were now at an elevation of nearly 6,000 feet. Leaving it, we commenced a very steep ascent, covered principally with low shrubs; we continued our way for about an hour through this stunted vegetation, making but slow progress, although we were much facilitated by having the path of the Tapir to crawl up. By following this track we reached a point from which a beautiful prospect of the low country is obtained, particularly to the eastward, where, as far as the eye could reach, it was one mass of conical-shaped hills, only one ridge rising to any considerable height above the rest; the point we had attained was the summit of one of the many peaks which form the upper range of the Organ Mountains. At about a quarter of a mile distant stood what I then believed to be the highest peak, and certainly not more than three or four hundred feet above us; but between the two peaks lay a deep densely-wooded ravine. It being now past two o'clock in the afternoon, it was too late to think of ascending it that day, so I determined to remain where we were for the night, and attempt it next day; but the blacks refused to do so, on account of no water being nearer than a little above where we had slept the previous night; as I could not force them to remain, I was, much against my will, obliged to abandon all idea of reaching the summit at this time. The summit of the peak on which we now were was quite a little flower-garden; a pretty Fuchsia, in full flower, was trailing over the bare rocks; in their clefts grew a handsome Amaryllis, and on all sides numerous flowering shrubs. The coolness of the air and the stillness were quite refreshing; not a sound was to be heard; and the only animals to be seen were a few small birds, so tame that they allowed us to come quite close to them. After partaking of a slight repast, we commenced our downward journey, and reached our encampment just as night was setting in."

Four years afterwards, these mountains were again visited, on returning from a journey through the interior of the country, and this visit is thus described:—

"Following the path I had made four years before, we reached, about four o'clock, the highest point I had attained on my former visit, and at this place, under the ledge of a rock, we slept for the night; this being a very convenient and well-sheltered spot, we decided to make it our head quarters during the few days we remained in the mountains. Besides specimens of nearly all the plants which I found on my previous journey, I collected on the ascent many that were new to me; two of the most remarkable of these were a kind of Fuchsia (F. alpestris, Gardn.), and a very extraordinary species of Utricularia; the latter, to which I have given the name of U. nelumbifolia, has since been published in Hooker's 'Icones Plantarum,' where a very excellent figure of it is given; like most of its congeners, it is aquatic, but what is most curious is that it is only to be found growing in the water which collects in the bottom of the leaves of a large Tillandsia, that inhabits abundantly an arid rocky part of the mountain, at an elevation of about 5000 feet above the level of the sea. Besides the ordinary method by seed, it propagates itself by runners, which it throws out from the base of the flower stem; this runner is always found directing itself towards the nearest Tillandsia, when it inserts its point into the water, and gives origin to a new plant, which, in its turn, sends out another shoot; in this manner I have seen not less than six plants united. The leaves, which are peltate, measure upwards of three inches across; and the flowering stem, which is upwards of two feet long, bears numerous large purple flowers.

"On the following morning, after an early breakfast, we set out to ascend that part of the Serra, which appears (from Mr. March's Fazenda) to be the highest; this peak, which I had been prevented from ascending in 1837, was reached in the following year by the Rev. Mr. Maister, who was then the English clergyman at Rio; and again, about six weeks before our visit, by Mr. Lobb, an English gardener, who had been sent out by a nurseryman to collect seeds and living plants: we thus found a path made ready for us. This part of the mountain is about 600 feet higher than the spot we had chosen for our bivouac. Starting then from this place, we made a descent into a wooded ravine, in which the ground was covered by the beautiful Alströmeria nemorosa, and many delicate Ferns, while the branches of the Melastomaceæ, and other trees and shrubs, were festooned with the climbing Fuchsia, brilliant with its rich scarlet blossoms. Then ascending for some time, through a well-wooded tract, we entered upon a steeper portion of the mountain, overspread with beautiful flowering shrubs, among which were several fine Melastomaceæ, fruticose Compositæ, a Gualtheria, some species of Vaccinium, and a handsome new Escallonia (E. organensis, Gardn.), bearing a profusion of rose-coloured blossoms. The summit of this peak we found to consist of several enormous loose blocks of granite, covered with lichens, small species of orchideæ, gesnereæ, and, where there was any accumulation of soil, a large-flowered Amaryllis (Hippeastrum organensis), now common in English hothouses; the climbing Fuchsia, in a dwarf procumbent state, was also found here....The day was beautifully clear, and we had a splendid view of the surrounding country. On looking to the westward, however, it was evident that we were not on the most elevated point of the range, as we observed, about a mile distant, a broadly-rounded peak, considerably higher; and we accordingly determined to ascend it on the following day. I here met with two very interesting plants, one a beautiful tree-fern, which proved to be the Hemitelia capensis, a native of the Cape of Good Hope, which is a remarkable fact in the geographical distribution of plants, as tree-ferns have a very limited range; the other was a very handsome herbaceous plant, about four feet high, with a woolly stem, and large leaves, not unlike those of a Verbascum, exhibiting large panicles of orange-coloured flowers; it belonged to the natural order compositæ, and as it proved to be a new genus, I named it after my late lamented friend J. E. Bowman, Esq., of Manchester.

"Early on the following day, we started to ascend the loftiest peak of the mountain, before noticed, and found it to be a more fatiguing journey than that of the previous day, in consequence of having to cut our way through two or three wooded tracts of considerable breadth; the paths of the Tapir, however, frequently facilitated our progress. Very shortly after we started, we were agreeably surprised to find, in the lower part of the valley we had to cross, a beautiful little stream of cool and limpid water, descending from the more elevated parts of the mountain, and flowing towards the east....This valley is somewhat less than a quarter of a mile square, and is covered on both sides of the stream, but particularly on the west, with virgin forests, the trees of which are of considerable size, one of the largest being a species of Weinmannia. The soil appears to be of excellent quality, there being a good depth of alluvial matter....Passing over a hill that bounds the western side of this valley, we came upon an open flat marshy tract, the greater part of which is covered with a tall coarse grass, about five feet high, growing in tufts. Leaving this, we entered another wooded spot, formed of trees of a much larger size than those before observed, and passed through it along the tracks of the Tapir, where I was rather surprised to observe that while the stem and branches of almost every tree were covered with the beautiful little Sophronites grandiflora, no other orchideous plant was to be seen; beyond this, we met with no more wood, the vegetation consisting of various herbaceous plants and a few stunted shrubs. From the wooded region, the summit of the mountain is gained by a steep acclivity, on one side of which is a broad ravine, full of immense blocks of granite.

"The summit of this peak we found to be very different from that we visited the day before, consisting of one great mass of granite flat on its surface, and of considerable extent; the rock is, for the most part, bare, but some portions of the western side were covered with a vegetation of stunted shrubs and herbaceous plants; among the latter, the most abundant was the pretty Prepusa Hookeriana, the large inflated calyces of which resemble those of some species of catchfly; on the very summit were seen many little excavations in the rock, full of excellent water, and, had we been aware of this, it would have saved us the trouble of carrying with us a supply in bottles. The day was very fine, but a broad belt of clouds that spread around the mountain below us prevented us from enjoying the extensive view on which we had fully calculated. At mid-day, the thermometer indicated a temperature of 64° in the shade, and I found that water boiled at a heat of 198°, from which I estimate the height of the mountain, above the level of the sea, to be 7800 feet. A register of the thermometer, kept during our stay on the upper regions of the Serra, and another observed on the level of Mr. March's Fazenda (3100 feet), gave a mean difference of temperature between the two places of 12·5°. Baron Humboldt estimates the mean decrement of heat within the tropics at 1° for every 344 feet of elevation, and considers this ratio as uniform up to the height of 8000 feet, beyond which it is reduced to three-fifths of that quantity, as far as the elevation of 20,000 feet; it has, however, been since found that, in general, the effect of elevation above the level of the sea, in diminishing temperature, is, in all latitudes, nearly in proportion to the height, the decrement being 1° of heat for every 352 feet of altitude; this would give 4400 feet for the elevation of the highest peak of the Organ Mountains above Mr. March's Fazenda, and as this is 3100 feet above the level of the sea, we have for the total greatest elevation 7500 feet. We returned to our former resting-place in the evening, well pleased with our day's excursion."

ON FORCING THE BANKSIAN ROSE.

BY SENEX.

OBSERVING directions given in the CABINET of 1844 that if the fresh young shoots of the Banksian Rose were taken off and inserted in pots in sand early in spring, they would readily strike root, if placed in moist heat, I took into my plant stove, early in January, a good plant each of the yellow and white kinds, with a view of producing the necessary young shoots. Not having previously introduced these kinds into the forcing-house, I did not anticipate being delighted with a profusion of their very neat flowers, but such was the result. When the clusters of blossoms were nearly opening, I took the plants into my greenhouse, where they bloomed most charmingly for several weeks. After blooming, I retained the plants in the same house till the young shoots had got somewhat hardened, after which I placed them behind the back wall of the greenhouse, where they stood till the first week in October; I then removed them into a cold pit, re-potting them previously into larger sized pots, in a compost of equal parts of sandy turfy loam and old rotted cow-dung. My plants so unexpectedly blooming the previous spring, early in December I took into the forcing-house the two plants forced before and other four with them, treating them in all respects as my other kinds of Roses, and all succeeded to admiration. I had a succession taken in the middle of January, which came in bloom at the early part of March. By using so rich a compost the plants grew vigorously, and a few luxuriant shoots pushed forth. After they had grown awhile, I cut them clean away, and at the autumn potting retained, at their entire length, all the medium-sized shoots that were necessary to form the plants properly. I deem it right just to remark that the Banksian Rose should not have its previous summer shoots shortened, whether grown in-doors or out in the open air, but cut clean away all unnecessary ones. The flowers are produced from the buds of these previous year's shoots. I am confident that whoever gives attention to this part of Rose culture will be amply repaid in this lovely tribe. In conclusion, I beg to state that this winter I have the former plants in fine bloom.

THE MOSS AND PROVENCE ROSES:

THEIR CULTURE.

BY MR. FREDERICK THORNE, OF TOTTENHAM PARK GARDENS, IN WILTSHIRE.

It is not surprising that so beautiful and fragrant a flower as the Rose, in its immensity of species and varieties, should be styled the queen of flowers, and have found enthusiasts to celebrate its virtues. Being an ardent admirer thereof induces me to forward for insertion in the April Cabinet a few remarks on the culture of the lovely tribes above named.

Where is there an object to be obtained more enchanting than Roses, placed in a lady's drawing-room, during the dull months of January and February, especially of an admirably-grown specimen of a Moss or Cabbage Rose, growing in a neat little flower-pot, producing from twelve to twenty-four beautifully-expanded blossoms, and in possessing, too, those superior qualities to which every lover of Nature's works is devotedly attached? Perhaps I may be permitted to say the above-named two varieties are the best adapted for early forcing. Where a moderate supply of these flowers is in request, about six dozen plants, judiciously managed, will be sufficient to form successions from December until the middle of May, at which time those in the Rose-garden will be pushing rapidly on. When these plants are forced very early, and when the flowers are quite exhausted, they ought to be retained in an intermediate house, until the wood is perfectly matured, at which time they may be taken out, without sustaining the slightest injury, and placed in a shady northern aspect. By standing the pots in dry sawdust, this will prevent the roots from penetrating into the soil beneath, which they are very apt to do; if not prevented in some way or other, it does the plant a serious injury when being removed again. If the pots are plunged to the rims, it will prove advantageous by using coal-ashes for a plunging material, and keeping the soil in which the plants are growing moderately dry; this will ensure the buds from being too much excited during the hot summer months. This point is a most essential one to guard against, for when these plants are fully exposed to the burning rays of a summer's sun, after being forced early, many of the buds are apt to make a growth which ought to produce blossoms for another season's supply. About the beginning of October the plants are pruned in, leaving only one bud on its young wood, then placed within an open shed for a week or so, to moderately dry previous to disrooting, at which time this operation commences by turning the ball out entirely, shaking all the old soil from the roots, pruning in the strongest, and retaining all that are fibrous, then stored away under a greenhouse stage, receiving no water until required for early work. This operation ought to be executed once every autumn, provided the plants are forced yearly. Six and eight-inch pots I generally use, the best of all sizes with which

I am acquainted for growing specimens of a neat habit. Of course, when fine plants of growth are the objects in view, larger pots must be used. The compost most suitable to the Rose which I have proved is well-decomposed manure collected from the cow-yard, mixed with good maiden loam, in about equal proportions, adding a small portion of silver sand. It is well known the Rose does not like to dwell in a sandy soil when growing in its natural state; however, a little, mixed with the other compost in which the plants are to be potted, will be an improvement. Treated as above described, the Moss and the Cabbage Rose will most successfully contend with forcing for many years successively, without the slightest failure. Undoubtedly a season of rest would prove beneficial to the plants; but where you are in possession of a limited number, this cannot be effected without depriving the greenhouse of a part of its beauty. I have often obtained good plants in collecting a quantity of stocks of the common wild Rosa canina, or Dog Rose, then by grafting some of the Moss and Provence Roses on the stocks, or roots, to which the grafts will unite freely, and in three or four weeks after will produce flowers, if judiciously managed. March is the proper season for this operation.

ON LUCILIA GRATISSIMA.

BY ISABELLA.

I HAVE noticed this lovely, fragrant flowering plant has often been recommended in this Magazine. I was induced to procure one early last summer, and grew it in my sitting-room window. At the end of October it began to expand its noble Hydrangea-like heads of flowers, and continued in successive bloom till the beginning of March. Every person delighting in winter-blooming ornaments, and especially such as combine a delicious fragrance, ought to cultivate the Luculia, both in the sitting-room, having a sunny aspect, or in the greenhouse, conservatory, &c. It is of easy culture, and readily propagated.

ON COVERING A WALL WITH PRETTY EVERGREENS.

BY MEDICUS.

ADJOINING to a morning sitting-room, and which is in full view through a glass door, I have a brick wall, ten feet high, and fifty yards in length, which I am very desirous of having covered with nice growing, neat-flowering evergreen plants; I am most anxious to have it look well throughout the winter season. I want to plant such this spring; I shall therefore be obliged by the list of a few sorts being given in the April Number. The premises are only recently taken possession of by me.

[The Lauristinus has a neat foliage, and blooms beautifully from October to May. Pyracantha blooms in May and June, and is succeeded by its profusion of scarlet-coloured fruit, which continue in beauty till spring. Berberis fascicularis (Mahonia of some people, or new Barberry) with its shining neat foliage and profusion of yellow flowers. The true evergreen Honeysuckles are always neat, and very beautiful when in bloom, especially the scarlet trumpet, and the red and white Jasminum revolutum. The foliage is fine, bright rich green, and its large clusters of rich yellow flowers produce a fine effect. Ceanothus thyrsiflorus, its large feathery heads of blue flowers borne plenteously are very pretty. To these may be added a few of the neatest evergreen Climbing roses. Clematis calycina, with its pretty pale yellow flowers. Several of the Magnolias are evergreen, and have a noble appearance, but the foliage would not properly harmonize with that of the above-mentioned plants. Nor are such noble plants in character with a wall training at all, more especially a low one. It would, perhaps, have too monotonous an appearance, if the entire was covered with the Lauristinus and Pyracantha, but if placed alternately, and the white flowers of the former being in contrast with the rich scarlet berries of the latter would produce a fine show through the entire winter.]

ON PRUNING ROSES.

Being an extensive rose grower, I have had the opportunity for many years of ascertaining the best season for pruning the various classes. I consider March, and early in April, to be the most suitable, varying a little from the early or lateness of the season. When roses are pruned in autumn, especially the autumn-flowering kinds, whose shoots are often not well ripened, they are very liable to be damaged. When pruned in autumn, and the winter is mild, the buds will push early, and are often injured by a casual frost occurring. The following attention to pruning is what I practise, and recommend to others.

Moss, Provence, Damask, and Alba.—These classes require to be pruned closely, as unless the knife be used freely, the plants present a very straggling appearance, and the flowers decrease in size. When the tree has formed a number of shoots, thin out the weakest, and leave about half a dozen strong shoots, standing at proper distances from each other; the lower shoots should be left about one foot long, and the central ones about eight inches; in the succeeding years prune back to three or four buds, and thus a good head will be secured to the tree.

French Hybrid Bourbon, and Hybrid Provence.—These do not require such severe cutting as the preceding. The shoots should be thinned and left at regular distances from each other. To secure a good-shaped tree, remove all the spurs that have produced bloom the last year, and shorten those which remain to within six or eight buds of the base.

Hybrid China, Hybrid Briar, Austrian Briar, and Sweet Briar.—The major part of these requires but a very partial use of the knife; they are mostly of a robust habit, and make long, vigorous shoots, which, if shortened too much, will produce an abundance of wood, but few blooms. The old flowering-wood should therefore be thinned as far as may be desirable, and the ends merely of the shoots of the stronger growing sorts cut off: the more moderate growing ones should be cut back to eight or ten eyes. If the last two-mentioned classes be pruned in June, they will require little or no pruning afterwards.

Climbing Roses.—The whole of this family require the same treatment; the old and weakly wood should be cut out, leaving only the healthy young wood, and cutting it back to three or four eyes.

The Banksian Rose is, however, an exception to the general rule, as it should not be pruned till the blooming season is over, or the bloom will be entirely destroyed.

Damask Perpetual, Hybrid Perpetual.—The heads of these should be thinned out well; cut off about two-thirds from each remaining shoot, but it is requisite to use the knife in the month of June, so as to secure a fine bloom in autumn: leave one-half of the summer shoots to perfect their flowers, and cut down the other half to four or five buds: these will soon put forth shoots, which will be again covered with flowers in September or October.

Bourbon, China, Tea-scented China.—These roses require little pruning: cut out the old flowering-wood about the end of April, also thin the young shoots, and shorten them to half their length.

PROPAGATION AND FLOWERING OF OLEA FRAGRANS.

BY A PRACTICAL GARDENER.

THIS most delightfully fragrant-flowering greenhouse plant merits a place in every greenhouse or sitting-room, but being considered difficult to increase and somewhat shy to flower, it is not often seen, in our collections of the present day; perhaps a principal objection is, that its small white flowers have not display sufficient for the general taste; its peculiar sweetness is merit for any place or attention.

The following is an easy method of propagating and blooming it, and which was given me by a friend a few years ago, since which I have adopted it with great success.

About the end of March I pot a sufficient number of straight-stemmed privet plants, and then head them down to about four inches from the surface of the soil, and an olive scion, six inches long, is engrafted (by tongue grafting) on the stock, the part of the scion below the tongue is kept its length, and is inserted in a small bottle, which is kept filled with water. The scion and stock are then tied tightly together with matting, and a little moss is put around instead of clay; they are then plunged in a cucumber frame, where they speedily unite. They make handsome plants the first summer, and bloom freely the following spring. The flowers too are much larger than young plants raised from cuttings or layers, and the plant is far more vigorous. The vast number of fibrous roots which the stock possesses receives an abundance of support at all times to realise every requirement the Olive needs.

ON BLOOMING NERIUM OLEANDER.

BY M. B. F.

I SHALL feel obliged to any correspondent or subscriber if they would give me any information, through your valuable Magazine, as to the best method of cultivating the Nerium Oleander. I cannot get my plants to flower well; they are kept in a cool plant-house, tolerably dry in the winter, and potted in loam and peat with a good drainage. An early reply will be esteemed.

WHAT IS GOOD PEAT?

THIS is a question upon which success in cultivation hinges as much as any question which could be put relative to the management of hard wooded plants, for do what you will, if your soil is bad or unhealthy, success is impossible. Some people imagine that if they get their soil from the same place as their more successful neighbours or competitors, they have done all that need be done to ensure a victory, little suspecting that in a given locality, say for illustration, Wimbledon Common, there is more bad peat than good; and that the non-practical man who digs his soil there will, perhaps, after he gets it home, be worse off than if he had taken his soil from one of the quarters in the kitchen-garden. This is a matter in which both science and theory are alike unable to assist the practical man, and so far as success in plant cultivation is concerned I would rather trust to what Mr. Kemp or my carter would select, than that which might be chosen by the combined intelligence of all the scientific or theoretic writers in the country. Good peat for hard-wooded heaths is that which is procured from open sites closely covered with dwarf young native heather, resting on a sandy porous bottom, the good soil itself rarely being more than an inch or two in thickness. This should be collected in the autumn, and after having the sandy portion removed should be laid up in narrow ridges, until the heather with which it is covered is thoroughly decayed, when it will be fit for use. Good peat, for more free growing plants, may be taken from more lowland situations, where sometimes it runs in layers four or five inches thick; and this, after the bad portions have been removed, should be stored in a large heap, where the decay of the fresh vegetable portions will be accelerated by fermentation. Good peat, to use as a substitute for leaf mould, may be collected in some large plantations, and results from the accumulation and decomposition of leaves, weeds, mosses, and other vegetable matter. If it can be procured from under trees in which wild doves or wood pigeons congregate, it will be found rich in guano; indeed, some which we procured from such a situation last year, when tested, evidenced the presence of ammonia in considerable abundance, and we found it of first-rate quality. Those who can get these three kinds of peat, with good turfy fibrous loam, and plenty of sand, may, if they know how to use them, grow plants of all descriptions.—*Gardener's Journal.*

ORNAMENTAL TREES, SHRUBS, AND FLOWERS.

BY — COLMAN.

The cultivation of ornamental trees, shrubs, and flowers is a remarkable and prominent feature in the landscape, &c.; of England, and a circumstance which has given no little gratification to my national pride has been the profusion of American plants, Azalias and Kalmicas, Magnolias and Rhododendrons, and a large variety of Pines and Firs, which are seen in the shrubberies, and plantations, and pleasure-grounds, both public and private. Greenhouses and conservatories are almost universal in the country where anything like the garden exists, and the better class of houses are surrounded and adorned with a great variety of flowering shrubs and plants, presenting through the season a charming succession of gay and brilliant ornaments. Even the labourer's humble cottage will occasionally have its flowering shrubs adorning its doorway, and the ivy hanging its beautiful tresses over its window, forming, as it were, a mirror set in a frame of the richest green. Churches and ruins, likewise, are often seen spread over with the richest mantlings of joy; and, among many others, the venerable and magnificent remains of Hardwicke Hall, for example, are covered, I may say, in the season of its flowering, with a gorgeous robe of it, matting its sides with indescribable luxuriance, climbing its lofty battlements, and fringing its empty windows and broken arches, as though Nature would make the pall of death exquisitely beautiful and splendid, that she might conceal the hideousness of decay, and shut from the sight of frail mortals those affecting monuments of the vanity of human grandeur and pride. I have seen and written a great deal to my countrymen about the cultivation of flowers, ornamental gardening, and rural embellishments, and I would read them a homily on the subject every day of every remaining year of my life, if I thought it would have the effect which I desire of inducing them to make the matter of particular attention and care. When a man asks me what is the use of shows and flowers, my first impulse always is to look under his hat and see the length of his ears. I am heartily sick of measuring everything by a standard of mere utility and profit; and as heartily do I pity the man who can see no good in life but in pecuniary gain, or in the mere animal indulgences of eating and drinking,

REPAIR YOUR OWN GLASS.

The following process of removing hard putty from the astragals of sashes, &c., may be useful, for by it no risk is incurred of extending the breakage. Heat the bolt of an Italian iron, or that which is commonly employed by plumbers in soldering, and draw it gently along the putty until the heat of the iron softens it. By this means much labour will be saved, and putty, which the chisel and hammer could scarcely clear off without injury to the astragals, can be softened so as to be easily removed by the gardener's knife.

MR. LOW'S VISIT TO SARAWAH.

THE object of this visit was to collect new plants; in doing so he had to penetrate the interior, which had not been visited by any previous collector. By the following particulars our readers will perceive that the work* is highly interesting, and contains a statement of facts coming under the notice of the author. We very cordially recommend it to our readers.

Borneo contains many splendid flowering plants; particular mention is made of some highly valuable ones. The most striking mentioned by Mr. Low are the species of Cœlogyne, called "Flowers of Mercy," all highly fragrant and exceedingly beautiful; several Vandas, of which a fine one has been named V. Lowei; a beautiful Cypripedium. Dendrobiums are insignificant; but the Ericas are abundant, and very beautiful. There are many beautiful species of Ixora and Pavetta; four beautiful species of Clerodendron, the handsomest of which, with crimson flowers, named after Captain C. D. Bethune, is introduced to England; Lysionotus Aucklandii, surpassing any other yet known; Hoya Imperialis; and a showy species of Bauhinia. Perhaps the most gorgeous are the species of Rhododendron, which here assume a peculiar form, being found epiphytal on the trunks of trees: the roots, instead of being small and fibrous, as with the species of colder climates, becomes large and fleshy, winding round the trunks of the forest trees. The most beautiful is the one named in compliment to Mr. Brooke (Rhododendron Brookeanum), the flowers being large, and in large heads, produced throughout the year, and of all shades, from full rich yellow, to a rich reddish salmon colour. The most attractive plants of all are, however, the pitcher plants, eight species of which Mr. Low discovered in the western part of the island. "The largest Bornean one, which I propose to call Nepenthes Hookeriana, in honour of Sir W. J. Hooker, the able director of the Botanic Garden at Kew, is found growing in deep and shady jungles, climbing to the tops of the trees. The pitcher is nine inches in length, having a large lid standing on a column which is a continuation of the beautiful edge of the pitcher: that part which is broadest, and turned towards the midrib of the leaf from which it depends, is furnished with two broad wings, which are beautifully ciliated; the broad pitcher, for this, like the Rafflesiana, produces two kinds, is generally crimson; the long pitcher differs from the other in its trumpet shape and green colour, which is spotted with crimson. Six plants of this are now in England." A species of Ipomœa, like I. Horsfalliæ, but with yellow flowers. The sugar-cane attains great perfection without the slightest cultivation. Nutmeg, planted for experiment, grew remarkably well, as also did the cinnamon and clove. The cabbage palm is the most esteemed vegetable produced in the island. The yet unopened fronds of a strong growing fern, a species of Marattia, when boiled, form an excellent vegetable, much preferred by European residents. The shoots of the bamboo are also an esteemed vegetable, and in the hands of the Europeans, make a most excellent pickle. Among the other more useful vegetable productions, Mr. Low mentions the cocoa-nut, sago palm, gomuti palm, betel, rice, &c. Of vegetable productions collected for exportation, there are Barus camphor, the produce of Dryobalanops camphora, which grows to a very large size. Vegetable tallow, or vegetable wax, a fatty oil obtained by the compression of the nuts of some species of Dipterocarpus; the species most valued attains the height of forty feet; the fruit is as large as a walnut, and yields a large proportion of oil, which in England has proved far to surpass olive oil for lubricating steam machinery. There are several other oil-producing plants. The seeds of the niato, or gutta percha, produce edible oil of a fine quality. The substance gutta percha, is more properly gutta suban, the percha being an inferior article; the tree is found in all the forests of the peninsula of Malacca, of Borneo, Singapore, and the adjacent islands. Jintawan is a substance similar in all respects to caoutchouc, and is the produce of a climbing plant of the genus Urceola; the thick, soft bark of which, on being cut, emits the sap in the greatest abundance, and without destroying the tree; there are three kinds in Borneo; the fruit is one of the most grateful of the country to the European palate. The celebrated Upas tree, Antiaris toxicaria, is found on the island, but not common; the poisonous sap flows freely from the bark when tapped. Dammar, the resinous gum of many kinds of trees, quite different from Dammara australis, is an article of considerable trade. The kulit lawang of commerce is the aromatic bark of a wild species of cinnamon, and is produced in abundance. Cotton of excellent quality has been produced on the island, and its cultivation will probably hereafter become important. Pepper is exported in large quantities; this aromatic is not used by the natives of the countries which produce it. Coffee thrives well. Tobacco is grown in small quantities. The Theobroma Cacao proves to be prolific in the island. Ginger grows well in the gardens, and turmeric is found wild in abundance. Many valuable hard woods are produced in the magnificent forests, but the trees are little known; the hardest and most durable is called baleau, and is almost incorruptible. There are in the island upwards of sixty species of trees which produce excellent timber. Ebony is abundant in many parts of the island. Several scented woods are known to exist.

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* Sarawah: its Inhabitants and Productions; being Notes during a residence in that Country, by Hugh Low, Colonial Secretary at Labuh-an. London: Bentley.

SELECTING SEEDS OF THE TEN-WEEK AND OTHER STOCK SEEDS.

A French florist states that, in order to have double flowers, select the seeds from those pods which are produced upon the stem in whorls of three or four around it at the same part, and to reject those pods which are produced singly and alternately along the stem, as is generally the case. He states that he has never been disappointed in the production of double flowers since he discovered this particular in selection. The extra accumulation of sap at that particular part of the plant gives a redundancy to the seed, and the result is seen in double flowers.

ON HOYA CARNOSA.

BY JUVENIS.

WILL you be so good as to inform me, through the medium of your very useful publication "THE FLORICULTURAL CABINET," what treatment I ought to pursue for the very handsome Hoya carnosa; that is, what kind of soil, the time for potting, and the best plan for raising and training it? An early answer will oblige.

[Cuttings taken off, and cut horizontally close under a joint, taking the leaf at such joint away, inserted firmly in white sand, and placed in moist heat, readily strike root. When well rooted, pot them in a rich loam and peat soil of equal parts, having a free drainage of potsherds. Care must be taken not to overpot at any time, as the soil then becomes saturated and improper; the plant delights in the fibrous roots cleaving to the side of the pot, its natural tendency to which is evidenced by the shoots, when coming in contact with a moist wall, emitting numerous rootlets. Re-pot every spring, and if the pot be very full of roots, in the interval remove it entire into a larger size. It requires to be grown in a hothouse to succeed the best; where such a habitation is not available, the warmest part of a greenhouse, &c., should be selected. Placing it in a hot-bed frame early in the season promotes the production of incipient flowers, after which the plant may be removed to a greenhouse, &c., to bloom.

The best mode of training the plant is to a wire trellis of some neat and fanciful form, as the pretty shapes of the vases now to be seen supply patterns. Such vase-formed wire frames are easily made so as to serve the purposes of displaying the bloom the best to view, whether the flowers are produced erect or drooping; for the former class, the greater the surface the more room to show; for the latter, the under side is what is required, as by the Hoya carnosa, so that verging outward the pendant clusters hang apart, and are exhibited to full view. Many of the vase forms are peculiarly adapted for this. The best way of having such frames affixed to the pots is to have the strong principals to extend two-thirds of the way down the outside of the pot; at the lower extremity they are secured by running through holes in a circular rim of wrought iron, the end of each having a head, to prevent its slipping upwards. The iron rim is so made that one end overlaps the other, and each having holes at an inch apart, through which a little bolt is put, keeps the girth so secured, but allows the same to be loosened from the pot, or extended, to suit a larger one when re-potted. A second girth goes round the pot, close under its upper edge, through which the principals pass; they are then turned inwards near the surface of the pot, so that they meet at the centre, forming a strong standard, which being lengthened to purpose, either long or short, is then formed above into any vase or other shape, numerous smaller wires being extended parallel to the principals, and intersected across, so as to form square or diamond meshes.

Such wire frames induce healthy grown climbing or trailing plants, trained horizontally around, or even having the shoots pendant, to produce a far greater quantity of flowers than if permitted to grow in a rambling or lengthy extended manner; besides which, the flowers are not only brought fully but near to view. Plants should be so prepared, if not done before, previous to pushing in spring.]

BEST VARIETIES OF CINERARIAS.

Twelve best kinds, it is stated in the *Gardeners' Journal*, are, Fairy Queen, Sapphire, Conqueror, Coelestus, Magnet, Nobilis, Purple Prince, Lady Russell, Beauty of St. John's Wood, Vernalis, Royal Crimson, and Maritima.

ON THE TEA-SCENTED CHINA ROSE.

BY AN ARDENT ADMIRER.

The time now approaching when plants of these lovely Roses are turned into open beds, &c., induces me to transmit a few observations relative to the practical and very successful attention which I have pursued in their cultivation.

I reside in Northamptonshire, so that the climate is not so hostile as many of the more northern. My garden has a good aspect, sloping gently to the south, but my house and flower-ground are upon a level basement; the latter has a somewhat wet subsoil. I therefore laboured under a disadvantage in cultivating these fine Roses. I found it essential to prepare a good drainage at the bottom of the beds, and had the soil thrown out about fifteen inches deep. Over the bottom I laid four or five inches thick of broken brickbats, and to prevent the soil from mixing with the drainage I laid over it a covering of Larch Fir branches, using the twiggy parts. This I find admits the surplus water to pass away from the soil, and at the same time keeps the drainage from being closed up by earth. I had a deeper drain made around the bed, into which the wet from the bed drained, and eventually sunk into the substratum. The effectual drainage is essential to success. The compost I filled up the bed with consisted of turfy-loam, two parts to one of well-rotted cow-dung. If the latter is not to be had at once, a year old rotted manure of a cucumber-bed will do, although I do not find it equal to the former. The surface of the bed was raised a few inches higher than the surrounding ground. In this I planted out of pots, entire, a fine assortment of the Tea Roses in the spring of 1844, and each successive season they have bloomed vigorously and in profusion. My flower department has a high yew hedge on the east, north, and west, and is well screened for winter protection, but I use the precaution of spreading over the surface of the bed several inches deep of dry beech leaves, and over these, around and among the Roses, I pricked in twigs of the beech. These admit a sufficiency of air to the plants, and at the same time give ample protection. I never prune the plants till they begin to push in spring, and at the same time I add, just pointing it in with the soil, two or three inches of rotten cow-dung. I never saw this class of Roses grown elsewhere bloom anything like my own.

FLORAL OPERATIONS FOR THE MONTH

WE have now arrived at a very important period of the year, and in a great measure the display of flowers in the following seasons, depends upon the provision now to be prepared. There is, therefore, a special demand upon the mind, and manual exertion too, to see that the proper kinds and quantities of seeds are sown, and plants in due preparation. Plans of flower gardens, &c. should be sketched on paper, and the appropriate regulations for future arrangement and plants required be put down; this attention is of much assistance.

IN THE FLOWER GARDEN.

Last month was the best time for grafting shrubs, ornamental kinds of trees as Thorns, Limes, &c., but the cold weather being more protracted, such sorts as have been omitted may still be done, but the earlier the better. The increase of Shrubs, &c., by layering, should be done as early as possible, such as Rhododendrons, &c.

Annuals, hardy, such as Clarkia, Nemophila, Larkspur, &c., may be sown in the open bed. The best method of sowing the small seeds in patches is to have a quantity of finely sifted soil, spread a portion where desired; after scattering the seeds, sprinkle a proportionate portion over, and then press it closely upon them, which will assist a more early and certain vegetation. If strong frost occur, it is advisable to cover a garden pot over during the night, and remove it in the morning. Seeds of *Biennials*, too, should now be sown in beds, such as Hollyhocks, Sweet Williams, Scabious, Canterbury Bells, &c. Also seeds of *Perennials* as Phloxes, Campanulas, &c. Newly budded trees, that is those budded last season, should be looked over, and if any portion of the stock be pushing shoots, they must be rubbed off, so that the entire strength should go to the new shoot engrafted.

AURICULAS.—Give air freely on all suitable occasions, to prevent the flower stems being drawn up weakly. They must, however, be protected against strong wind and dust. By the end of the month the blossoms will be opening, no water must be allowed to fall upon them, and they must be shaded from hot sun by canvas. A stage of shelves inclosed in a wooden frame or similar provision, having the bottom shelf two feet or so high, and gradually rising, &c., also to be properly shaded, is an erection indispensable to showing them to advantage.

POLYANTHUSES too require similar attention to the Auriculas. Neither kinds should be allowed to droop for want of water, and the stems, if by casualty are too weak to sustain the truss, must be supported by a neat stick, &c.

PINKS.—If beds of them were not made in autumn and omitted too last month, they ought to be done immediately, if required to bloom the coming season. A loamy soil, made of turfs a few inches thick, and well rotted, with an equal portion of old decayed cow-dung, is admirably adapted for their growth. It should be nine inches deep, and have a good drainage below. The plants must be removed with as much of the ball of soil as possible, and be planted six inches apart. High raised beds are not beneficial except in low wet situations. Where a compost, as above, is not at hand, six inches thick of old cow-dung should be dug in with common garden soil.

Ranunculuses and **Anemones.**—When the plants make their appearance, and are risen an inch or two high, care must be paid to have the soil pressed closely around them with the hands, stopping up any holes made by worms, &c. A top dressing too of rich compost, free from wireworm, is very beneficial. If common large worms exist in the bed, they may be collected by the hand at night, or pure lime-water poured between the rows will kill the worms, and not injure the plants. If allowed to remain, they are very injurious. Often stir up the soil between the rows. Showers of rain are very beneficial for their growth; if none fall, occasional watering, with soft water, in the morning, should be given. Well-water is injurious. Weak manure water occasionally poured between the plants contributes to vigour. If severe frost should occur, cover at night.

Tulips.—Stir the surface of the bed an inch deep. Protect from frost, and strong wind, also from the mid-day sun, say from ten till four o'clock. Keep the soil firm around the stem.

Carnations and **Picotees.**—If not potted off the end of last month, they should be done immediately.

Hyacinths should be protected from frost, sun, and wind; secure by tying to proper supports. Stir up the surface soil.

Pansies in beds must have the soil pressed around the plants, and a top dressing of rich soil an inch or two thick will be beneficial. New beds of them should also be planted.

Chrysanthemums.—Procure pieces of the shortest of the young shoots from the base of the old stems, with as much root as practicable; pot them in very small pots, and place them on a gentle bottom heat till they are well rooted; then gradually harden them, and pot them on during the summer, according to the size the plants are required. You may do this as soon as you please. If there are not short pieces, take off the tops of the shoots and plant them as cuttings.

IN THE FORCING FRAME.

Balsams, Cockscombs, Globe Amaranthuses, &c., that require potting off, or re-potting, should be duly attended to; also Thunbergias, Browallias, Lobelias, Brachycoma, &c. Seedling Fuchsias, Verbenas, Petunias, &c., should be potted off singly. Dahlias too should be placed so as not to be drawn up weakly. Achimenises must be potted off singly. (See Articles on Culture in previous Numbers.) Tender Annuals, as Stocks, Zinnias, &c., should be placed in a cool frame or pit to prevent them being drawn up weakly. Where it is practicable to prick out, such as Stocks, Asters, &c., upon beds, and protect with frames, it should be done; it gives a robust growth to them. Cuttings of Fuchsias, Petunias, Verbenas, and many other greenhouse plants, should now be put off. Young plants of Fuchsias now procured, if six inches high, will make fine ones for shows in summer.

IN THE GREENHOUSE AND COLD FRAME.

Admit all the air possible. Re-pot Lobelias, Tigridias, Geraniums, Verbenas, and other similar plants for beds. All other kinds of plants requiring re-potting should now be done (see compost &c., in last month's Calendar). Such as are straggling, &c. should be cut in to render them bushy. Camellias, when done blooming, examine the roots, and, if necessary, re-pot (see Articles upon, for soil, &c.) ; then place them in a warm part of the greenhouse, or forcing house, giving due attention to watering, &c., till the wood is firm and flower-buds are set; they may then be removed to a cool pit, so as to be gradually hardened by more air, &c. Japan Lilies, &c., should be duly encouraged by re-potting, &c. Peat soil and sand is what they flourish in best.

Orange trees in a border or in tubs should have a portion of the surface soil taken away, and a good top dressing of mellow-loam and leaf mould, with a tolerable portion of sheep or pigeons' dung, is intermixed, and re-pot any that require it. A careful inspection of the greenhouse plants should be made to see which require re-potting, and do it at once, not waiting to some general performance; always attend to it when it is wanted. Azaleas, young plants that are beginning to push, let them be re-potted; such as have done blooming must directly be re-potted, and their growth afresh be gently promoted in a higher temperature for a short time. Any required to bloom late should be kept in a cool situation at present.

ERICAS.—Any requiring re-potting should be done directly; avoid too large pots with the less vigorous growers, but free growers will require room to extend in proportion. Do not elevate the collar of the roots higher than the rim of the pot, and allow a depth for water when poured in. Give air freely, but avoid draughts, especially from east and north.

IN THE STOVE.

Aerodendron, Erythrina, Justicia, Eranthemum, Gloriosa, Ixora, Brugmansia, and similar plants, should duly be hastened on for exhibiting display for shows, &c. Achimenes re-pot. Gloxinias re-pot. Amaryllis, promote vigorous growth of.

ON THE DESTRUCTION OF THRIP.

BY JAMES BARNES.

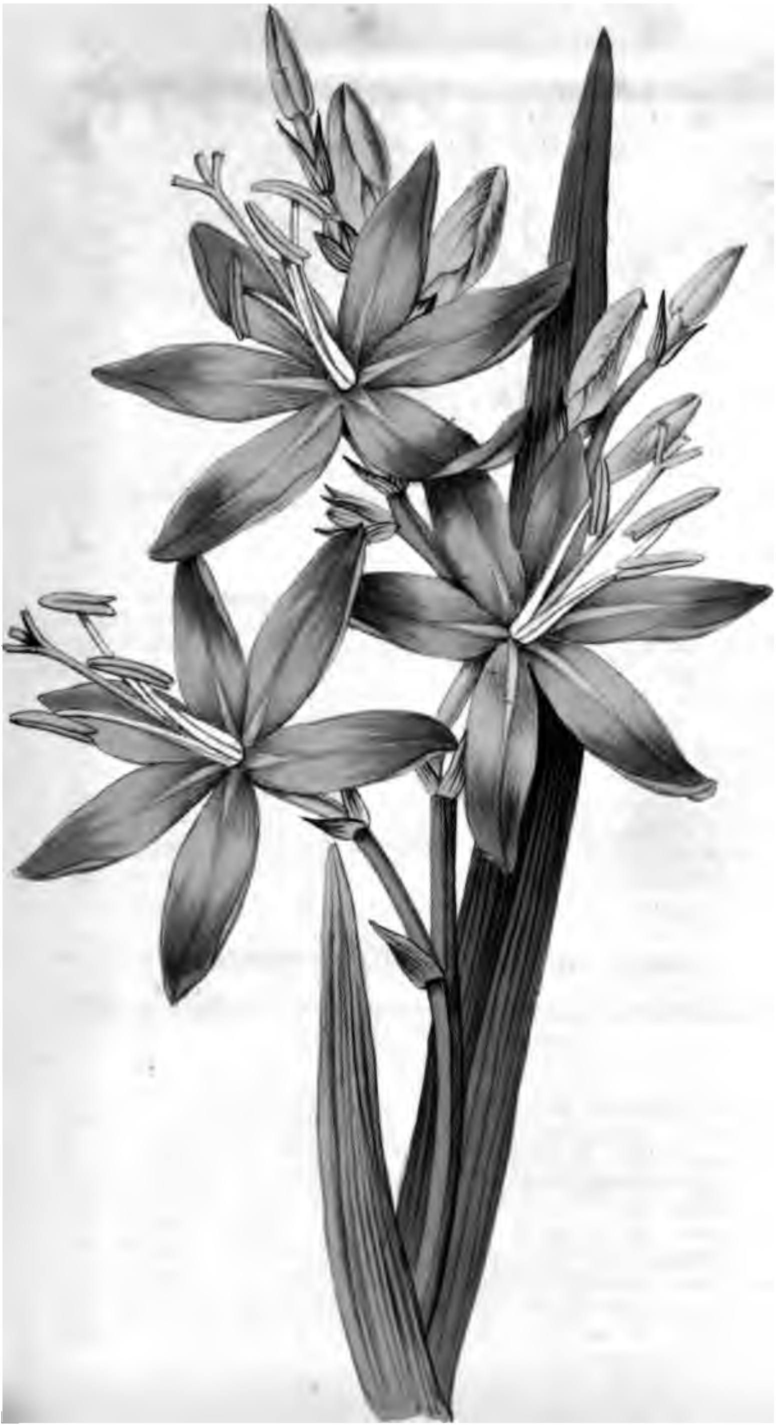
ALMOST every gardener is tolerably well acquainted with this troublesome and destructive little enemy. I have heard of many articles and contrivances being applied to extirpate and destroy it, but have found no remedy so simple and effective as that which I have now practised for some years. And it is not only perfectly effectual in destroying these pests, but it likewise acts as a fertiliser to all plants in a growing state to which it may be applied; moreover it costs nothing, and is at every one's command. The following is my plan:—I take a peck and a half of soot, and put it into one hogshead of soft water, stirring it well with an old broom or batten every day for ten days or a fortnight. I then strain off the water through a fine sieve, or piece of canvass, into another tub, on a peck of charcoal, and drop into it afterwards one or two lumps, or about three pounds of fresh lime; in about two days after I strain it again, and it is then clear enough to syringe any plant or plants with. It will not only extirpate thrip, but many other troublesome insects also; and it is a famous liquor to syringe with, whether for destroying insects or not, as it induces general vigour and healthiness amongst plants of all kinds. If but a single plant is affected with the insects, and it is not desirable to syringe, the plant may be dipped into the liquid, and one or two repetitions will prove an effectual remedy. Sometimes Azaleas, after they have made their growth, and have stood about in dry weather, are subject to be attacked, and a quantity of these could be readily dipped. Plants that have made their growth, or are in a dormant state, should be laid in a slanting direction when syringed, for it is not desirable that too much of the liquor should fall on the soil in which the roots are situated. I have recommended this remedy to many practical men, who have all expressed themselves perfectly satisfied with the results which have followed its application. —(*Gardeners' Journal.*)

BRIEF NOTES AND CORRESPONDENCE.

Aimee Vibert Noisette Rose.—During the past summer and autumn I travelled for several weeks in various parts of England, and I was struck with the beauty of the above Rose when trained against a dwelling-house or wall. The profusion of its lovely neat-formed flowers, of a snowy whiteness, produced a most pleasing effect. I saw it generally grown in the surrounding neighbourhood of a good nursery garden, and it appeared to be the almost universal favourite. Many plants I saw trained to the height of three or four yards, covering a space of several feet wide. It deserves to be grown by every person who has the conveuience. **Miss Glegg** is a very similar Rose, but I suppose is of more recent origin; I only saw three specimens of it trained, and they had only been, apparently, planted a year or so; it is, however, a neat and handsome variety. Both kinds, too, will form dwarf bushes, and are very suitable for beds where low growth is desirable. They soon fill a bed.—W.

An old Subscriber would feel obliged if one of your readers will kindly inform her as to the best mode of treating Clematis azurea grandiflora in a cool greenhouse, what kind of soil best suits it, and whether it should have much or little water.

Pinks—J. Barber.—The following twenty-four varieties will be most likely to suit you; they are the best which we saw at the various London exhibitions; viz., Alfred Morison, Esq. (Costar), Alpha (Garratt), Beatrice (Kirtland), Criterion (M'Lean), Diana (Smith), Dr. Coke (Smith), Duke of Northumberland (Headley), Elizabeth (Stow), Gem (Hodge), George Glenny (Bragg), Great Britain (Ward), Harriet (Kerr), Henry Creed (Norman), Majestic (Collis), Masterpiece (Turner), Melona (Hodge), Oxoniensis (Smith), President (Creed), Princess Royal (Smith), Queen (Church), Queen of England (Hall), Queen of Roses (Garratt), Queen Victoria (Bunkill), Warden of Winchester (White).



Tritonia aurea.

FLORICULTURAL CABINET

MAY, 1848.

ILLUSTRATIONS.

TRITONIA AUREA—Golden Tritonia.

THIS very beautiful flowering plant was discovered by our highly esteemed friend Mr. James Backhouse, nurseryman, of York. It flourishes admirably, grown either in a pot or the open border. It requires to have a free drainage, and to be grown in a sandy-turfy peat. It succeeds in a cool pit, frame, or greenhouse, also in the open border, treated as is done with the Ixias, viz., a south-aspected, sheltered, warm situation. We have seen the Ixias in pit frames, and along the front of a greenhouse, brick wall, &c., bloom most charmingly; and this fine Tritonia, no doubt, will do equally well. It blooms a long period, and deserves to be in every collection of bulbous plants.

NOTES ON NEW OR RARE PLANTS.

Aristolochia grandiflora—Pelican-flower, or Poison Hog-meat. (Syn. A. gigas.)

Aristolochia. Gynandria Hexandria.

A native of the West India Islands and of the northern parts of the continent of South America. It is a climbing, shrubby, hothouse plant, and although it will succeed when grown in a pot, it does better when planted in the open border or bed, where its roots can extend considerably; in such a place it blooms nearly all the summer season. The flower is drooping, of very large size when fully expanded; the limb is nearly a foot long and eight inches broad, with a very long slender tail. The entire limb is oval-heart shaped, and the yellowish-white ground colour is radiated with a striking network of deep blood-purple veins. The mouth of the tube is large, and the interior, as well as a portion around its summit, is of a very dark purple-brown colour.

The young flowers, when in bud, are bent like a siphon in the tube, so as to resemble the body of a bird, and the limb then appears like the head and beak being thrown back upon the body, similar to the pelican bird when it is at rest. The large, singular blossoms give the plant a most remarkable appearance; if the colours were clear, the contrast would, in proportion, be more beautiful in network and mottled appearance. It has bloomed in the collection at the Royal Gardens of Kew and at the Horticultural Society's Garden at Chiswick. (Figured in *Bot. Mag.*, 4369.)

CATTLEYA BULBOSA—THE BULBOUS CATTLEYA.

Orchidaceæ. Gynandria Monandria.

Supposed to be a native of Brazil. It has recently bloomed in the splendid collection of S. Rucker, Esq., of Wandsworth, near London. It is of a smallish stature, the flower stems being each about five inches long; a separate blossom is about four inches across. The sepals and petals are, in colour, a mixture of lilac, rose, and crimson. The labellum is hollow, and in that part white edged with lilac, but the spreading lobes are of a rich rosy-crimson. It is a very interesting, handsome species. Most of the orchideous plants are best increased whilst in a state of rest, but this when it has commenced growing. It flourishes in potsherds, turfy-peat and Sphagnum moss being preferable to securing it to a block of wood. (Figured in *Pax. Mag. Bot.*)

ERYTHRINA BIDWILLII—MR. BIDWILL'S CORAL-TREE.

Leguminosæ. Diadelphia Decandria.

This is an hybrid which has been raised from E. herbacea, impregnated by E. Crista gallii, and it is of an intermediate habit, both in size and colour too, of its flowers. The colour is a deep crimson. Most likely it will thrive in the open air, as is the case with E. Crista gallii and E. laurifolia. These being planted in a warm sheltered situation thrive and flower freely. After blooming, the tops die down, the dead portions being cut away, and a wooden box, or large garden-pot, &c., being turned over the root, after being filled with dry leaves or moss, which secures the plant from injury during winter.

In our last volume, page 248, we noticed a most splendid specimen of E. laurifolia, which then bloomed in the Royal Gardens of Kew.

GOLDFUSSIA ISOPHYLLA—EQUAL-LEAVED. (Syn. Ruellia, species.)

Acanthaceæ. Didynamia Angiospermia.

It is a shrubby plant, bushy, growing two to three feet high, and blooms very freely. The leaves are narrow, lance-shaped, about four inches long. The shoots are four-sided in form. The flower stalks are each about an inch long, proceeding from the axils of the leaves, and each has a head of three or four blossoms. The flower has a funnel-shaped tube, an inch long, with an oblique mouth of five nearly equal lobes. The entire flower is variegated with white, pale blue, and rose. It is a native of the East Indies, and is a very valuable winter-flowering plant for a stove or warm greenhouse. (Figured in *Bot. Mag.*)

LOPIMEA MALACOPHYLLA—SOFT-LEAVED. (Syn. Sida malacophylla.)

Malvaceæ. Monadelphia Polyandria.

Mr. Purdie sent this plant from New Grenada to the Royal Gardens of Kew, where it blooms freely in the stove in winter and spring. The plant grows from three to five feet high, shrubby, with round. herbaceous, downy branches; leaves cordate, notched, very soft and downy. The flowers spring from the axils of the leaves, two or three together. A separate blossom is about an inch and a half across, five-petalled, spreading, of a bright rosy-red colour. Although there is a wide disproportion in the size of the leaves and flowers, it is, however, an ornamental plant for its winter-flowering season. (Figured in *Bot. Mag.*)

RHODODENDRON STANDISHII—MR. STANDISH'S.

A hardy hybrid Rhododendron, raised between R. altaclarence and R. maximum. The flowers are of large size, a rosy-crimson at first opening, but changes to a lilac-purple. The upper petal has a dark blotch, with a few spots around it. (Figured in *Pax. Mag. Bot.*)

SALVIA OPPOSITIFLORA—OPPOSITE-FLOWERED SAGE.

This very pretty species is a native of Peru, from whence it was sent by Mr. Lobb to Messrs. Veitch, of Exeter. It is a hardy greenhouse shrubby plant, blooming very profusely. It is a fine plant for the open-air borders and beds. The stems at first are procumbent, but soon push erect. The leaves are cordate-oblong, about an inch and a half lengthways. The flowers are borne on long racemose spikes, of a pretty bright orange-red colour, a separate blossom being an inch long. (Figured in *Pax. Mag. Bot.*)

STROBILANTHUS LACTATUS—MILKY-LEAVED.

Acanthaceæ. Didynamia Angiospermia.

It is probably a native of the East Indies, and Mr. Low has it under the name of Ruellia grandis. It appears to be a dwarfish plant, the branches being herbaceous. The leaves are ovate-acuminate, of a purplish colour at the under side and dark green above, having a broad milky-white line along the middle. The tube of the flower is funnel-shaped, and the limb is five-parted. A separate blossom is about an inch long, and nearly as much across the flower. They are of a purplish-white. (Figured in *Bot. Mag.*, 4366.)

NEW PLANTS NOTICED IN NURSERIES, &c.

At the Royal Gardens of Kew.

In the greenhouse there was (April 14th) a fine display of plants in bloom, especially of the lovely, fragrant Acacias, of which there is a very extensive collection, some of which are only numbered, the proper specific names, probably, not being known, or they may be hybrid productions which never had a distinct title given.

ACACIA No. 8.—The flowers are in largish-sized globes, of a very rich deep yellow, and are borne in spikes in vast profusion; the foliage, too, is strikingly neat.

Acacia dentifera.—Flowers a deep golden-yellow, produced in great profusion in spikes. It is a later blooming plant than any other we saw.

Acacia No. 5.—The flowers are a bright rich yellow, borne in very branching, long spikes, and in profusion. It is a beautiful kind.

Acacia cultriforme.—Flowers a pretty sulphur colour, borne in short spikes; the foliage is of a light tomentose hue. It is a very neat species.

Acacia No. 1.—The flowers have largish-sized globular heads, of a deep rich yellow, borne in great profusion. The foliage is particularly neat.

Acacia pentastema.—The flowers are of a pretty sulphur colour, and borne in vast profusion. The foliage is particularly neat. A beautiful species.

Acacia celastrifolia.—The flowers a neat pale sulphur colour, produced in clusters.

Acacia soppora.—Flowers a pretty light yellow, in spikes about half-a-yard long; showy.

Acacia nigrescens.—Flowers rich yellow, in spikes, which are a foot long.

Acacia No. 11.—Flowers bright sulphur, in vast profusion. A very handsome kind.

Acacia No. 10.—Flowers a rich golden-yellow, borne in vast profusion. A beautiful kind.

Acacia No. 192.—Stated to be from the Swan River colony. Flowers borne densely in stiff lateral branches.

Acacia præmorsa.—Flowers a primrose colour, in large globes, very profuse.

Acacia sulcata.—A slender, very neat looking plant. The flowers are produced in spikes of about six inches long; they are of a deep rich yellow.

Acacia lineata.—Flowers a deep golden-yellow colour, and in vast profusion. A very neat species.

Acacia verticillata.—Flowers of a pale yellow, in profusion.

Acacia marginata.—Flowers a rich deep yellow, in vast abundance. A very handsome species.

The above are the best flowering we selected out of the collection, and each is very distinct in appearance from any other. They are highly ornamental, and blooming at so early a season renders them very acceptable. They would be valuable acquisitions to any greenhouse or sitting-room, and well merit a place there.

Salvia gesnerifolia.—A plant in the greenhouse, six feet high and as much across; it was in splendid bloom. The flowers are of very rich scarlet-red colour, borne in spikes, which contain from thirty to forty flowers in each. A separate flower is about two inches long. The plant had a considerable number of heads of flowers. The attractive colour of its flowers, and its beginning to bloom so early in the spring, and continuing to the close of the summer, contribute, too, to render it worthy of a place in every greenhouse, &c.

Epacris paludosa.—The flowers are a very pure white, borne in rather short dense heads, but have a very pretty appearance. It well merits a place in every collection, its profusion being quite gay.

Epacris mucronata.—Flowers pure white, in profusion; very neat and pretty.

Epacris impressa rubra.—The flowers long, a rosy-scarlet, produced in vast abundance.

Begonias.—There were several very interesting, handsome varieties in bloom; their fine branching heads of pellucid flowers, at this early season, had an elegant appearance. The kinds in bloom were, B. Fischer, flowers flesh colour; B. nitida, rosy flesh colour; B. muricata, white, in a large branching head; B. sanguinea, flowers white, in fine heads, leaves blood colour; B. albo coccinea, white and red, very handsome; B. hydrophyllum, flowers pretty pale pink, very handsome; B. odorata, flowers pure white, each about an inch across, very neat and pretty; B. manicata, flowers pale pink, borne in very large branching heads, and when in full bloom it is a most lovely species, deserving to be in every collection.

. **Achimenes ocellata.**—Flowers deep crimson-red. Each blossom is about an inch long in its wide tube, and three-quarters of an inch across the limb. They hang pendant. Interesting and pretty.

Pultænea thymifolia.—The lovely little pea-formed flowers, borne in profusion, produce a pretty effect.

Templetonia glauca.—Flowers of a light vivid red, pea-flowered; profuse and pretty.

Cytisus filipes.—Its very numerous pure white pea-formed flowers produce a pretty effect in contrast with other blossoms of sundry colours.

Dielytra spectabilis.—This is a charming plant, sent to this country by Mr. Fortune from China. The flowers are borne in racemes of from four to six inches long, of a waxy rosy-pink colour. It bears forcing well, and is a very interesting object when in full bloom.

CINERARIAS.

This charming ornamental tribe of flowers has recently been much improved by the more perfect formed of hybrid productions. A very peculiar class has been raised at the nursery of Mr. E. Henderson, of Wellington Nursery, St. John's Wood, London. The plants are of dwarf habit, about a foothigh, and of a compact form; also bloom very profusely, forming an entire head of flowers. The flowers selected out of their immense lot of seedlings offered to the public are of excellent character. Several very superior ones are now blooming for the first time, and will not be offered for sale this season. We noticed the following kinds in fine bloom, viz.,—

Beauty of St. John's Wood.—Rich rosy-crimson, with an inner circle of pure white, and a dark disk (centre). The colours are very clear and distinct, producing a pretty effect. A single blossom is about an inch and a half across. A dwarfish grower and profuse bloomer.

Brilliant.—Bright purple, with a dark disk; a separate blossom an inch across.

Sapphire.—Fine blue, with a disk much beautified with the golden anthers; flower one inch across.

Eclipse.—Violet, with a light coloured disk; one inch across.

Desirable (Ivery's).—Dark rising disk, surrounded with a white circle, and terminating with a rich purple margin, by tips of petals.

Isabella (Henderson's).—Disk very dark, surrounded with cream-coloured circle, and terminating with a broad margin of rich violet.

Favourite.—Disk a buff colour, surrounded with a rosy circle and terminating in a blue margin; one inch across.

Countess of Zetland.—The disk rises high, and is dark, with the remainder of a rich crimson; very striking.

Maritima.—Disk high, surrounded with a white circle, terminating with a broad margin of purple. The petals are rather narrow for the length, but the flowers produce a very striking appearance.

Compacta (Good's).—Disk is dark, surrounded with a narrow circle of very pure white, and terminating with other portion of a pretty rose colour. Flower an inch and a half across.

The Pet.—Disk very dark, surrounded with a white circle and terminating with a broad margin of violet and rose; flower an inch across.

Conqueror.—Disk a creamy-buff colour, and the rest of the flower a rich blue.

Prime Minister.—Disk high and very dark, surrounded with a white circle and terminating with a broad margin of bright rose; flower an inch and a quarter across; very striking.

Purple Prince.—Disk very dark, surrounded with a circle of purple and terminating in a rich blue margin; very striking.

Maid of Artois.—Disk dark, surrounded with rosy-red circle and terminating in a broad margin of rich blue. It is a profuse bloomer; very showy.

Anais.—Disk buff colour, surrounded with a white circle and terminating with a broad pink margin; flower an inch across; very showy.

Attraction.—Disk dark, and the remainder a bright crimson; very fine.

Beauty of Wareham.—Disk violet, surrounded with a broad white circle, terminating with a rich violet margin. Flower an inch across, petals rather narrow, but being a profuse bloomer is very interesting.

Colossus.—Disk high, nearly white, with the rest of the flower a bright violet. Flower one inch across, and very fine.

Nobilis.—Disk dark, surrounded with a white circle and terminating with a light purple margin. Flower one inch across.

Duchess of Sutherland (Ivery's).—Disk very dark, surrounded with a pure white circle and terminating with a violet coloured margin; a very good variety.

One in the Ring (Ivery's).—Disk high, dark, and is surrounded with a white circle, terminating with a broad margin of purple; very pretty.

The above kinds we can recommend as being first-rate in form, or general display, and ought to be grown in every greenhouse or cool frame. The descriptive list of others will be continued in our next number.

SYNOPSIS OF THE BEST FLORISTS' FLOWERS.

BY THE PRINCIPAL FLORISTS.

At the request of several Correspondents, and availing ourselves of the kind aid of the leading Cultivators, we give the following List of Twenty-four Dahlias in each class, which are prepared by the growers whose names appear at the head.

We purpose to extend these lists to all popular flowers, and publish them from time to time.

Those kind marked with an asterisk are now being sent out for the first time.

1.—BEST SELF-COLOURED DAHLIAS.

Name.	Raiser.	Colour.	Mr. Glenny, London.	Mr. Keynes, Salisbury.	Mr. Barnes, Stowmarket.	Mr. Gaines, Battersea.	Mr. Spary, Denford.	Mr. Whale, Elcot.	Mr. C. W. Harrison, Richmond.
Ackbar	Gaines	Purple	.	.	.	1	.	.	.
Admiral Stopford	Trentfield	Black	1	1	1	1	1	1	.
Antagonist	Bragg	White	.	.	.	1	1	1	.
Athlete	Cheveau	Lilac	.	.	.	.	1	1	.
Aurantia	Spary	Orange	.	.	.	.	1	1	.
Beeswing	Drummond	Red	1	1	1	1	1	1	1
Bermondsey Bee	Proctor	Purple	1	1	.	.	1	.	.
Berryer	Turner	Black	1	.	1	1	.	1	1
Boule de Feu	Barnes	Red	1	1	1	.	1	1	1
Box	Drummond	Scarlet	.	1	1	.	1	1	1
Captain Warner	Girling	Crimson	.	.	1	1	1	1	1
Cassandra	Fellows	Crimson	1	.	.	.	1	1	.
Cleopatra	Attwell	Yellow	.	.	.	.	.	1	.
Countess of Clarendon	Union	White	1	1	.	.	.	.	.
Crocus	Barnes	Yellow	1	.	1	.	.	.	.
Dr. Graham	Ready	Dark	.	.	.	1	.	.	.
Emperor of the Whites	Heale		.	1	.	.	.	.	.
Essex Rosy Lilac	Turville		.	.	1	.	1	.	.
Essex Triomph	Turville	Black	1	.	.	1	1	1	1
Fire King	Harrison	Red	.	.	.	.	.	.	1
Fire King	Turville	Orange	1	1	1	1	1	1	1
Fulwood Scarlet	Teebay		.	.	.	1	.	.	.
Golden Fleece	Union	Buff	1	1	.	.	.	1	1
Lady Leicester	Girling	Buff	.	.	.	.	.	.	1
Louis Philippe	Turner	Crimson	1	1	.	.	1	.	1
Marchioness of Cornwallis	Whale	Blush	1	1	1	1	1	1	1
Marquis of Aylesbury	Whale	Purple	1	.	.	.	1	1	1
Minn	Drummond	Rosy-purple	.	1	1	.	1	1	1
Miss Sarah	Edward	Blush	.	1	.	.	1	.	.
Mount Blanc	Gaines	White	.	.	.	1	.	.	1
Mrs. Anderson	Girling	Rosy-lilac	.	.	1	.	.	.	.
Mrs. Shelley	Mitchell	Rosy-purple	1	.	.	1	1	.	1
Negro	Gaines	Plum	.	.	.	1	.	.	.
Nell Gwynne	Pope	Sulphur	.	1	1	.	.	.	.
Nonpariel	Proctor	Scarlet	1	1	1	1	1	1	1
Petrarca		Fiery-red	.	.	.	.	.	.	1
Pride of Surrey	Gaines	Purple	.	.	.	1	.	.	.
Queen of Roses	Widnall	Rose	1	1	.	.	.	.	.
Queen of Sheba	Watkinson	White	1	.	1	.	.	.	.
Robusta	Gaines	Crimson-red	.	.	.	1	.	.	.
Rose de Amour	Brown	Rose	1	.	1	.	.	.	.
Rosetta	Gisling	Rose	.	.	1	1	.	.	.
Samuel Girling	Barnes	Claret	.	.	1	.	.	.	1
Scarlet Gem	Turner	Scarlet	1	1	.	1	1	1	.
Schone Erfurtien	Schmidt	Blush	.	.	1	.	.	.	.

1.—BEST SELF-COLOURED DAHLIAS—*continued.*

Name.	Raiser	Colour.	Mr. Glenny, London.	Mr. Keynes, Salisbury.	Mr. Barnes, Stowmarket.	Mr. Gaines, Battersea.	Mr. Spary, Denford.	Mr. Whale, Elcot.	Mr. C. W. Harrison, Richmond.
Shylock	Collisson	Scarlet	1	1	1	1	1	1	1
Sir E. Antrobus	Keynes	Red	.	1	.	.	.	1	.
Sir H. Smith	Gaines	Claret	.	.	.	1	.	.	.
Standard of Perfection	Keynes	Crimson	1	1	1	1	1	1	1
Toison d'Or	Batteur	Orange	.	1	1	.	.	.	1
Victorine	Bushell	Lilac	.	.	.	1	.	.	.
Walter Hilston	Dodd	Orange	1	1	1	.	.	1	1
War Eagle	Keynes	Red	1	1	.	.	.	.	.
Yellow Standard	Keynes	Yellow	1	1	1	1	1	1	1

2.—BEST LACED OR SHADED DAHLIAS.

Adrian de Cardoville	. .	Shaded blush	.	1	.	.	.	.	.
Alarm	Hill	White and crimson	.	.	.	1	.	.	1
Alexandrina	Sorrell	White and rose	.	1	1	.	.	.	1
Amy	Cook	Blush and pink	.	1	1	.	.	.	.
Andromeda	Collisson	Amber and rose	1	1	1	1	1	1	1
Beauty of Hants	Oakley	Shaded blush	1	1	1	1	1	1	1
Beauty of Sussex	Mitchell	White and crimson	1	1	1	1	1	1	1
Beauty of the Plain	Sparry	White and lilac	.	1	.	.	.	.	.
Bohemian Girl	Proctor	White and purple	1	.	.	.	.	.	.
Captivation	Brown	Crimson and puce	1	1	.	.	1	.	1
Conspicua	Girling	Sulphur and rose	.	.	1	.	.	.	.
Countess of Zetland	Gaines	. .	.	.	.	1	.	.	.
Delicata	Wildman	White and crimson	.	.	.	.	1	1	.
*Delight	Whale	White and purple	1	1	1	1	1	1	1
Duncan	. .	Lemon and rose	.	.	.	1	.	.	1
Exquisite	Holmes	White and lilac	1	.	.	.	.	.	.
*Gem	Oakley	White and lilac	1	1	1	1	1	1	1
Gloria Mundi	Headley	Buff and pink	1	.	.	.	1	1	1
Hamlet	Brown	Shaded crimson	.	1	.	.	.	.	.
*Helen Carr	Barnes	Shaded blush	1	.	1	.	.	.	.
Lady A. Hervey	Girling	White and rose	.	.	1	.	.	.	.
Lady Antrobus	Keynes	White and lilac	1	.	.	.	1	.	.
Lady Featherstone	Sparry	White and purple	.	.	1	1	1	.	.
Lady of the Lake	Keynes	White and crimson	1	1	1	1	1	1	1
Lady Sale	Smith	Yellow and red	1	1	.	.	.	.	.
Lady St. Maur	Brown	White and lilac	1	1	1	1	1	1	1
Lillywhite	Drummond	Shaded cream	.	.	.	.	.	1	.
Madame Zehler	Zehler	Yellow and red	.	1	.	.	.	.	1
*Maid of Kent	. .	White and cherry	1	.	1	.	.	.	.
Marquise de Peyreuse	. .	White and rose	1	1	1	.	.	.	1
Mary Ann	Harrison	White and purple	.	.	.	1	.	.	1
Marquis of Worcester	Sealey	White and pink	1	1	1	.	1	1	1
Matchless	Whale	White and purple	.	.	.	.	.	1	.
Miranda	Whale	White and rose	.	.	.	.	1	1	.
Miss Vyse	Turner	White and lilac	1	1	1	1	1	1	1
Mrs. Edwards	Bragg	. .	.	1	1	.	.	.	.
Northern Beauty	Robinson	White and crimson	.	.	1	.	.	.	.
*Pius IX.	Tassart	Shaded peach	.	1	.	.	.	.	.
Pre-eminent	Gaines	White and cherry	.	.	.	1	.	.	.
*Primrose Superior	Gaines	Sulphur and blush	.	.	.	1	.	.	.
Princess Radziwill	Gaines	White and crimson	1	1	1	1	1	1	1
Princess Royal	Hudson	Amber and purple	1	1	.	1	1	.	1
*Queen of England	Keynes	White and crimson	1	1	1	1	1	1	1
Queen of the Isles	Low	White and crimson	.	.	.	1	.	.	.
Raphael	Brown	Crimson & maroon	.	.	.	.	1	.	1
Rebecca	Edward	White and rose	.	.	.	1	.	.	.
Royal Chancellor	Widnall	Shaded maroon	.	.	.	.	.	1	1
Sarah	Drummond	White and cherry	.	.	1	1	1	1	1
Star	Bragg	White & carmine	1	1	1	1	1	1	1
*Victor	Simpkin	White & lavender	.	.	.	.	.	1	1

3.—BEST "FANCY" DAHLIAS.

Name	Raiser.	Colour.	Mr. Glenny, London.	Mr. Keynes, Salisbury.	Mr. Barnes, Stowmarket.	Mr. Gaines, Battersea.	Mr. Spary, Denford.	Mr. Whale, Elcot.	Mr. C. W. Harrison, Richmond.
Admirable	Girling	Red and white	1	1	1	1	1	.	1
Adolph Dubras	Ressequier	Nankeen & white	1	1	1	1	1	.	1
Arnal	De Cattre	Red and white	.	1	.	.	.	.	.
Baron Freteau de Peny	. .	Scarlet and white	.	.	.	.	.	.	1
Bella Donna	Harrison	Red and white	1	.	1	.	.	.	1
Belted Knight	Keynes	Buff and orange	1	1	1	.	.	.	.
Boquet de Brueil	. .	Orange and white	.	.	.	.	.	.	.
Cassiope	Spary	. .	.	.	.	.	1	.	.
Circe	Harrison	Crimson and white	.	.	.	.	.	.	1
Conseiller	Massart	. .	.	.	.	1	.	.	.
Coquette	Schmidt	Rose and white	1	1	.	.	1	.	1
Delicata	Girling	Rose and white	.	.	.	.	1	.	.
Duchess of Sutherland	Turville	. .	.	1	.	.	.	.	.
Elegans	Girling	Crimson and white	.	.	1	1	1	.	.
Eliza	Girling	Purple and white	.	1	.	.	.	.	.
Empereur de Maroc	Huidoux	Black and white	.	.	1	.	.	.	1
Erecta	Girling	Crimson and white	.	.	.	1	.	.	.
Erherzoz Stephen	Deegen	Violet and white	1	.	1	.	1	.	1
Ereque de Dijon	. .	. .	.	1	.	1	.	.	.
Florence Dombey	Salter	Yellow and white	.	1	1	.	.	.	1
Fra Diavolo	Girondini	Maroon and white	.	.	.	1	.	.	.
Glorie des Dahlias	Zehler	Black and white.	1	.	.	.	.	.	.
Harlequin	Dodd	. .	.	.	.	1	.	.	.
Hermione	Mohring	Red and white	1	1	.	.	1	.	.
Jeannie Deans	Harrison	Red and white	1	1	1	1	1	.	1
Jenny Lind	Barnes	Black and white.	1	1	1	.	1	.	1
La Carnation	Girling	Crimson and white	.	.	.	1	.	.	.
Lady Sale	Harrison	Yellow and white	1	.	.	.	.	.	1
Liebliche von Elsterthal	Deegen	Yellow and white	.	.	1	.	.	.	.
Letitia	Barnes	Purple and white	.	.	1	.	.	.	.
Ludwig Perusl	Deegen	Coral and white	1	.	1	.	1	.	1
Madame Chauvière	Girling	Rose and white	1	1	.	.	.	.	.
Madame Dresser	Deegen	Rose and white	.	.	.	1	.	.	.
Madame Levitte	Whale	Crimson and white	.	.	.	1	.	.	.
Madame Wachy	. .	Violet and white.	1	1	1	.	1	.	1
Madame Wallner	Girling	Black and white	.	.	.	1	1	.	1
Magpie	Barnes	Black and blush.	.	.	1	.	.	.	.
Maid of Lodi	. .	. .	.	.	.	1	.	.	.
Master G. Clayton	Jeffrey	Purple and white	1	1	1	1	1	.	1
Mimosa	Truelle	Yellow and white	.	1	1	1	1	.	1
Minerva	Girling	Buff and white	1	.	.	1	.	.	1
Mirobolant	De Knyff	Crimson and white	.	.	.	.	1	.	.
Miss Peel	Harrison	Crimson and blush	1	.	.	.	.	.	1
Miss Watson	Girling	Purple and white	.	.	1	.	1	.	.
Mons. Wallner	Girling	Maroon and white	.	.	1	.	.	.	.
Mons. Chereau	Brady	Cherry and white	.	.	.	.	.	.	1
Mrs. Shaw Lefevre	Bragg	Rose and white	1	1	1	1	1	.	1
Multicolor Admirabilis	Mardner	Yellow & crimson	.	.	.	.	1	.	.
Narcissus	Harrison	Crimson and white	.	1	.	.	.	.	1
Ninette	Delattre	Rose and white	.	1	.	.	.	.	.
Ober Justizrath	. .	. .	.	.	.	.	.	.	.
Ober Von Werlhoff	. .	Brown and white	.	.	.	1	1	.	.
Pantaloon	Bragg	Crimson and white	.	.	.	1	.	.	.
Papillion	De Vilnarete	Rose and white	.	1	.	.	.	.	.
Queen of the French	Bragg	Yellow and white	1	1	.	.	.	.	.
Reizende Von Elsterthal	Deegen	Red and white	.	.	1	.	.	.	.
Remembrancer	Barnes	Red and white	1	1	1	1	1	.	1
Robin Hood	Barnes	Scarlet and white	1	.	1	.	.	.	.
Roi des Pointes	. .	Maroon and white	1	1	1	1	1	.	1
Surprize	Oakley	Crimson and white	1	.	.	1	1	.	.
Vesta	Bruneau	Lilac and white	.	.	.	.	.	.	1
Viscomte de Ressequier	Dubras	Violet and white	1	1	.	1	1	.	1

TAKING IMPRESSIONS OF SPECIMENS OF FLOWERS, LEAVES, BRANCHES, &c., BY THE PHOTOGENIC PROCESS.

BY FLORA.

THIS very interesting and easy method of taking drawings of flowers, &c., was recommended in an early number of this Magazine, and it led me to practise it with all the kinds of flowers I have been able to procure, and I now possess coloured figures of 3020 different species and varieties of plants, which being neatly arranged in suitable pages, form twenty highly interesting and useful volumes. In the page with the figure, I have wrote all necessary particulars relative to the plant, as to its name, native country, habit, culture, &c.

After having properly taken the impression, I colour the same both leaves, stems, and flowers, provided my specimen so extends. Since the period I commenced this pleasing department of floral attention, there has doubtless been many new subscribers to the CABINET, and who may not be acquainted with the process of the photogenic operation, and as it will afford the young especially a most delightful employment, also lead to an increasing attachment to the vegetable part of creation, and flowers more particularly, I herewith forward the essentials of the process for insertion in the next Number of this Magazine, hoping that with the successive periods of this year, many of my young friends will be thus interestingly and usefully engaged; and in winter's more dreary days, or evenings derive pleasure in a reperusal of what has been effected.

I have adopted the process as hereafter detailed, and strongly recommend the following proportions, both effectual and economical. Two hundred grains of common salt are to be dissolved in a pint of water, and sheets of thin blue-wove post paper, saturated with the solution, which for this purpose should be poured into a dish, and the paper being immersed, the application of the solution to every part should be insured by the use of a sponge, or camel's hair-brush. The paper is then to be removed, drained of its superfluous moisture, and nearly dried by pressure between folds of linen or bibulous paper.

Two hundred and forty grains of fused nitrate of silver are then to be dissolved in twelve fluid ounces of water, and this solution is to be applied by means of a sponge to one side of each sheet of the previously prepared paper, which side should be marked with a pencil, so that when the paper is fit for use, the prepared side may be distinguished. The sheets of paper are then to be hung upon lines in a dark room to dry, and when nearly free from moisture, their marked sides are to be once more sponged over with the solution of silver, and finally dried; they are then to be cut into pieces of convenient size, and preserved from light, or even too much exposure to air, by being wrapped up in several folds of brown paper, and kept in a portfolio.

The proportions above recommended are sufficient for the preparation of a quire of the kind of paper alluded to; if more of the salt of silver were used, the paper would indeed become darker by the action of light, but its expense would be proportionally increased; and when prepared in the manner directed, it assumes by less than a minute's exposure to the rays of the sun, a rich mulberry brown tint, of sufficient intensity to define an outline very beautifully, which indeed is all that is required.

To use this paper, the specimen, of which a drawing is required, is removed from the herbarium, placed on a piece of the paper. and kept *in situ* by a pane of common glass pressed by weights; a piece of plate glass, however, is preferable, as it is sufficiently heavy to press the plant close to the paper. The whole is then placed in the sunshine, and in less than a minute all the uncovered parts of the paper will assume a rich brown tint. The paper should then be removed from the direct influence of the sun, and placed in a book until the drawing be made permanent; the specimen, quite uninjured by the process, may then be replaced in the herbarium, and the drawing of another taken, and so on. So rapidly is this process executed, that twenty-five or thirty drawings may be obtained in an hour, providing we are favoured with a direct sunbeam; if, however, we have only the diffused daylight five or ten minutes, and sometimes even more, are required to produce a drawing with well-defined outlines.

If drawings of recent plants be required, specimens of proper size should be cut, and if not too rigid, placed on a piece of paper, and kept in a proper position by means of a pane of glass, as in the case of dried specimens; but if the plant be rigid, the specimens should be placed for twenty-four hours between folds of blotting-paper, under a heavy weight, before placing them on the sensitive paper. Having obtained as many drawings as are required, the next thing is to fix them, so that their otherwise evanescent character may not deprive them of their value. For this purpose, place them in a dish, and pour cold water over them; allow them to soak for ten minutes, and then transfer them to, or sponge them over with, a solution, made by dissolving an ounce of common salt in half a pint of water, to which half a fluid ounce of the tincture of sesqui-chloride of iron has been added. The drawings thus prepared may be dried by pressure between folds of linen, and exposure to the air; and may then be examined without danger. On looking at them, every one must be struck with the extreme accuracy with which every scale, nay, every projecting hair, is preserved on the paper; the character and habit of the plant is most beautifully delineated, and if the leaves be not too opaque, the venation is most exquisitely represented; this is particularly the case with the more delicate ferns, as *Polypodium Dryopteris.* Among those classes of plants which appear to be more fitted than others for representation by this process, may be ranked the ferns, grasses, and umbelliferous plants; the photogenic drawings of the former are indeed of exquisite beauty.

The fact of the object being white on a brown ground does not affect the utility of this mode of making botanic drawings; indeed I almost fancy that their character is better preserved by this contrast to tint, than by a coloured outline on a white ground. Every one will be fully aware of the value of this process to the botanist, in obtaining drawings of rare plants preserved in the herbaria of others, and which he would otherwise have probably no means of obtaining.

If the drawing of a tree or a large shrub be required, a box blackened inside, having a hole at one end about one and a quarter inch in diameter, must be provided; in this hole should be placed a lens of five or six inches focus; if one of longer focus be used, the dispersion of light becomes too great to insure an accurate representation. When the tree or shrub is well illuminated by the solar beams, the lens should be presented towards it, at a distance varying of course with the height of the object. A piece of card-board should then be placed in the box, a little beyond the true focus of the lens, and the former until a well-defined bright image of the tree, &c., is formed on the card, of course in an inverted direction. The box is then to be placed on any convenient support in this position, and a piece of the prepared paper fixed on the card, the lid of the box is then to be closed, and the whole left for half an hour, at the end of which time a beautifully accurate outline of the object will be found on the paper, which is then to be rendered permanent in the usual manner. It is obvious that this plan is unavailable on a windy day, on account of the branches of the tree, &c., being continually moving, so that it is of far less use to the botanist than the above described process for obtaining drawings of small specimens.

ON THE CULTURE OF PELARGONIUMS.

One of the most celebrated flower gardeners in the neighbourhood of London cultivates the Pelargonium, unequalled both for in-doors and the open border, by the following easy and simple method. He secures, too, young and vigorous plants, and of a neat bushy form.

He always makes it a rule to put in cuttings in the beginning of July every year, and prepares them in the usual way, viz., takes them off with three joints, cuts off the bottom leaves pretty close to the stem, and makes a cut clear across the bottom joint. They are then planted round the edges of pots nine inches in diameter, filled to within an inch of the rim with a compost of leaf-mould, loam, and peat, in equal parts, and the remaining inch with light maiden soil. After the cuttings are pressed pretty tight in the pots, and well watered, they are placed in a frame facing the south, and in very sunny weather they are shaded. After the first ten days, a little air is given when required. When rooted, they are potted into large 60-sized pots, with light maiden soil, and kept in the frame till they have struck fresh roots; then inure them to the open air, and let them remain till it is necessary to take them into the greenhouse, at which time the leading shoot is stopped. At the end of March following, shift them into pots six inches in diameter, in a compost of equal parts of vegetable mould, good loam, and well-rotted cow-dung, at least a year old; mix, but do not sift it, and put it under a cover a few days to dry. After this potting, a little extra heat is given, with plenty of water and air, which quickly brings them into flower. When the bloom is over, turn some of them out into the borders to flower again in summer and autumn. The essentials of this mode of treatment are, striking cuttings in July every year, which prevents the plants getting too large; potting, when struck, in small pots and poor soil; shifting, in spring, into larger pots and very rich compost; and planting out in beds in summer.

ON YELLOW PICOTEES.

BY AN AMATEUR FLORIST.

EVERY summer, for the last seven years, I have been anxious to see the Yellow Picotees exhibited at the London shows, with a hope to see some flowers with petals of a good substance, smooth edges, and fine-formed outline, equalling the first-rate of the other colours, but hitherto I have been disappointed. The foreign kinds are of the flimsy-petalled character, and with jagged edges, unfit for an exhibition. I hope our own country florists will exercise their usual industry and skill in attempts to obtain what is so very desirable, the perfection of the Yellow Picotee in colour and form. I am confident the success would amply repay for attention.

GUANO.

BY A BEGINNER.

THE application of Guano, as a top-dressing, to improve the growth of plants, has often been recommended. I am desirous to know the best period for its application, and how it is to be done.

[It must be mixed up with six times its bulk of dryish soil, or peat, or wood ashes. Damp weather is most suitable, as it soon dissolves; and the period to apply it is just when the plants are commencing to grow. It generally proves beneficial, greatly improving the healthy appearance of the foliage.]

TO MAKE OLD SEEDS GERMINATE.

BY AN AMATEUR.

PUT them in a bottle nearly filled with oxalic acid; let them remain there till the germination is observable, which generally takes place in from twenty-four to forty-eight hours; then take them out, and sow them in the usual manner. Another way is to wet a woollen cloth with oxalic acid, on which the seeds are put; it is then folded up and kept in a stove. By this method small and hard seeds will germinate equally as well as in a bottle. Also very small seeds are sown in pots, and placed in a hot-bed, and oxalic acid, much diluted, is applied twice or thrice a-day till they begin to grow. Particular care must be taken to remove the seeds out of the acid as soon as the least vegetation is observable. By this means seeds from twenty to forty years old have been found to grow, whilst the same sort, sown in the usual manner, did not grow at all.

ON LILIUM LANCIFOLIUM AND ITS VARIETIES.

BY MR. JAMES CLARKE, OF NEWCASTLE-ON-TYNE.

This delightful tribe of Lilies I have grown for the last three years, and, as at first directed, I planted the bulbs in the pots, so that only about one-half of each was in the compost. In potting my bulbs last year, by some means one was put into a pot, and covered three or four inches deep; as the stems pushed forth, I perceived this one to grow much more vigorous than the others, and it bloomed much finer. On turning out the bulbs from the pots this season, I discovered that a number of strong roots had issued from that portion of the flower stem which was in the soil, and had thus contributed to the superior growth and blooming.

THE HYDRANGEA HORTENSIS AS AN OPEN-AIR BORDER FLOWER.

BY LUCY.

The Hydrangea hortensis has long been a most deserving favourite in this country; but its cultivation has almost entirely been confined to the greenhouse or dwelling-house window, in the latter to a very considerable extent, in which it appears as one of its finest ornaments, displaying for a long period its lovely rose or blue flowers in profusion. No other shrub displays such noble heads of blossoms, nor equals it in show, when properly grown, especially when cultivated aright in the open-air shrub border.

I have often wondered that, with everything desirable to recommend it, it should not have been universally deemed particularly adapted for adorning the pleasure-ground. A few instances have, however, come under my notice, and in one there were several plants about five feet high, and at least two yards across, laden with a profusion of the noble heads of flowers, than which no plants could appear more strikingly ornamental.

The situation to grow them in should be sheltered in every other aspect but the south; it likes the full sun. The soil should be rich, consisting of equal parts of fresh loam, peat, and well-rotted manure, with a little of leaf-mould.

If the natural substratum is not a dry one, it should be made one with broken brickbats or stones, with a few twigs of trees over them, to prevent the soil choking up the drainage. The compost must be half-a-yard deep. With such a provision it will grow vigorously for many years. In very dry seasons an occasional watering at the roots will be an essential benefit. The best time to plant out is in spring, about the end of April, the plant having previously been a little pushed in-doors. This gives the summer season to have the roots well established, and the shoots to become well ripened.

Every strong shoot of the Hydrangea usually bears a head of blossoms, and in proportion to quantity will be the size. This will render it necessary to prune the last year's shoots closely, so as to leave only two or three buds on each, and when these push to take some of them away, so as only to retain such a quantity as will furnish the bush regularly, and be vigorous too. To prevent injury from the severity of winter, give a covering of dry leaves, several inches deep, to plants which are pruned within a few inches of the ground, such being concealed by a wooden box; and to plants that are two or three feet high, an ornamental wooden stand for a vase, or something of that sort, suited to the locality of the plant, answers admirably, removing it towards the end of March. With attention like what I now state, and which I have proved, this very fine shrub will grace every situation it is placed in, and most amply repay the care bestowed, in its profusion of rose or blue flowers, for a long period.

REPTON, THE LANDSCAPE GARDENER.

Perhaps there is no stronger proof of Mr. Repton's love for the beauties of nature than the wish he had latterly expressed that his remains might be deposited in a "garden of Roses." To gratify this innocent fancy, he himself selected the small enclosure on the south side of the picturesque church of Aylsham, in Norfolk: a simple Gothic monument records his name and age, followed by some lines written by himself:—

"The tomb of Humphry Repton, who died March 24th, 1818.

> 'Not like the Egyptian tyrants—consecrate,
> Unmixt with others shall my dust remain;
> But mouldering, blended, melting into earth,
> Mine shall give form and colour to the Rose;
> And while its vivid blossoms cheer mankind,
> Its perfumed odour shall ascend to heaven.'"

In the same grave reposes that gentle being who, for five-and-forty years, had been the beloved participator in all his joys and griefs; she did not long survive him, and it was her last request that they should not be separated in death.

ON THE TREATMENT OF NERIUM OLEANDER.

BY COMMELLINA.

I transmit the following remarks for insertion in the Cabinet, hoping they may be of use to your correspondent M. B. F.

During winter the Nerium Oleander should be kept scrupulously clean, and the scale insect looked for and removed. If the axils of the leaves become clogged with a rusty-looking substance, difficult to dislodge without tearing the foliage, it is worth while to fill them, by means of a small brush, with a paste composed of powdered sulphur and a lather of soft-soap. About the middle of February this should be washed off, and the plants repotted. Shake off as much of the old soil as you can without breaking the finer rootlets; drain well, and pot in a compost of a quarter sandy-peat, a quarter dung, and a half good light loam. Shade for a few days; bring the plants gradually nearer the light, and from the time they begin to grow keep their heads near the glass. The quantity of water they receive must be regulated by the warmth of the position, but they always require a free supply. When in full flower, they should have it twice a-day; but, unless they droop, it is best to avoid saucers, or at all events to empty them at night. In the south of France (where the growth of the Oleander is extremely vigorous) they are usually planted close to running water. Syringe every evening in warm weather until the flower heads begin to open.

I have seen these beautiful shrubs from six to eight feet high, and bushy in proportion, covered with flowers for months under this treatment.

If you, or M. B. F., can inform me where I could procure the double white Oleander, the Tangle variety, or the single dark red, it will very much oblige a constant reader of the CABINET for many years.

[We can supply the three kinds mentioned.]

ON FUCHSIA SERRATIFOLIA BLOOMING IN THE OPEN AIR.

BY A SUBSCRIBER.

Is there any chance of Fuchsia serratifolia flourishing or flowering in the open air?

I have in my dwelling-house a plant of the above of the unwieldy size of ten feet in height, and in preference to cutting it down I thought, when the proper time arrives, of planting it out and training it to a pole or wall, in a sheltered situation.

An answer in your next number will much oblige.

[It blooms freely in the open air when grown in a sheltered, sunny situation, but produces the prettiest effect trained up a pole. A larch, with the branches cut back, so as to retain the stumps six inches long, admits the shoots to be secured at a distance from the trunk, so that the pendant heads of lovely flowers hang out fully to view. The pole being painted green gives it neatness.

It does well against a good aspected wall, but it requires to be trained to a trellis, as the stems are liable to be injured by the hot temperature of bricks, &c., which in summer scorches the fleshy shoots, but a trellis at a little distance from the wall preserves them from such injury, and by duly securing the blooming shoots, so as to admit of the heads of flowers hanging outwards, they display their beauties very interestingly.

In a warm, dry situation, proper attention to watering at the roots will be necessary. Early in May the plant should be put out, in order to obtain as much growth as possible, and an early state of blooming. It continues to flower to the end of summer. The plant, if taken up with a tolerable ball of roots, &c., at the end of the season, and put into a pot, tub, or basket, can be preserved readily in winter in-doors; and, by exciting its growth the following spring, it will prepare it for turning out as before. A few young plants should be provided every spring for blooming in the greenhouse, conservatory, or sitting-room, in winter. It is an admirable plant for the purpose.]

FLORAL EXHIBITIONS.

ROYAL SOUTH LONDON SOCIETY.

The first exhibition for the season was held in the large room at the Horns Tavern, Kennington, on April 19th, and upon the whole was very creditable. In Florists' Flowers, the 1st prize, amongst amateurs, for the best pair of *Auriculas*, was awarded to W. Ginger, Esq., of Maida Hill, for Hedges' Britannia, and Dickson's Duke of Wellington; 2nd prize, to J. Chapman, Esq., of Brixton, for Mawes' Violet, and Hedges' Britannia; 3rd prize, to W. Trahar, Esq., for Dickson's Duke of Wellington and Unique. For the best collection of four *Auriculas*, the 1st prize was taken by W. Ginger, Esq., for Stretch's Alexander, Kenyon's Ringleader, Hedges' Britannia, and Dickson's Apollo; 2nd prize, J. Chapman, Esq., for Hedges' Britannia, Yates' Lord Collingwood, Dickson's Duke of Wellington, and Seedling. In the Nurserymen's Class, Mr. James Dickson, of Brixton, was awarded the 1st prize for Dickson's Duke of Wellington, Page's Champion and Defiance, and Dickson's Unique; 2nd prize, Mr. J. Bushell, for Gorton's Champion, Dickson's Duke of Wellington, Taylor's Glory, and Gabel's Duke of Wellington. For the best pair of *Polyanthuses*, J. Edwards, Esq., of Holloway, was awarded the 1st prize, for Freedom and Alexander. *Heartsease*, twenty-four dissimilar blooms. In the Amateurs' Class, the 1st prize was awarded to J. Edwards, Esq., of Holloway, for Duke of Wellington, Almanza, Rainbow, Duchess of Rutland, Great Britain, Companion, White Serjeant, Norfolk Hero, Mr. Hamilton, Lady Sale, Shakspeare, Blooming Girl, Youell's Supreme, Model of Perfection, Mary Jane, Regulator, Optimus, Dr. Wolff, Constellation, Daughter of St. Mark, Hunt's Wellington, Bellissima, Prince of Orange, and Wonderful; 2nd prize, Mr. Over, of Streatham, for Rainbow, Optimus, Mary Jane, Climax, Virgil, Jehu, Belvidere, Trefoso, Sappho, Pompey, Zabdi, Almanza, Pliny, Excellent, Goliah, Perfection, Madonna, Pulcher, Perseus, Duchess of Rutland, Euclid, Prince of Orange, Model of Perfection, and Hampden; 3rd prize, Mr. Bridges, of Croydon, for Mary Jane, Goliah, Fanny, Companion, Almanza, Seedling, Trefoso, Blooming Girl, One in the Ring, Duchess of Rutland, Excellent, Optimus, Exquisite, Constellation, Superb, Hunt's Wellington, Tom Pinch, Perseus, Duchess of Norfolk, Rainbow, Candidate, Lord Hardinge, Perfection, and Iver Queen. In the Nurserymen's Class, equal 1st prizes were awarded to Mr. Thomson, of Iver, and Mr. Turner, of Chalvey. Mr. Thomson's flowers were—Pre-eminent, Excellent, Almanza, Zabdi, Optimus, Constellation, Perseus, Aurora, Corsair, Pulcher, Lady Sale, Rainbow, Bridesmaid, Virgil, Sappho, Yellow Seedling, Gloria Mundi, Model of Perfection, Duke of Wellington, Duke of Rutland, Fair Flora, Youell's Supreme, Bell's Lady Lacon, and Climax; Mr. Turner's stand contained—Hooper's Blooming Girl, Thomson's Constellation, Hooper's Mary Jane, Hall's Rainbow, Nasmyth's Mr. Hamilton, Hooper's Duke of Wellington, Great Britain, Turner's Miss Edwards, Bragg's Goliah, Hooper's Lady Sale, Backhouse's Dr. Wolff, Thomson's Duchess of Rutland, Turner's

Optimus, Example, and Caroline, Thomson's Zabdi, Chater's Model of Perfection, Thomson's Shakspeare, Hooper's Wonderful, Thomson's Dr. Hawtrey, Youell's Supreme, Ondine, Collison's Perseus, and Bell's Climax; 2nd prize, Messrs. Bragg and Bright, of Slough, for Hooper's Duke of Wellington, Hall's Rainbow, Optimus, Constellation, Hunt's Desirable, Bragg's Charon, Optimus, Hooper's True Briton, Almanza, Lady Sale, Seedling, Bragg's Clara, Dr. Wolff, Bragg's Colossus, Youell's Supreme, Perseus, Exquisite, Trefoso, Duchess of Rutland, Seedling, Duke of Rutland, Eliza, Mrs. Bragg, and Thomson's Perfection; 3rd prize, Mr. Cutter, of Slough, for Raindow, Seedling, Virgil, Curion, Perseus, Shakspeare's Goliah, Aurora, Supreme, Climax, Seedling, Magrath, Arethusa, Duke of Norfolk, Model of Perfection, Dr. Wolff, Optimus, Apollo, Snowdrop, Perfection, Duke of Wellington, and Duke of Rutland. For the best twelve *Cinerarias*, in pots, Mr. Ivery, of Peckham, received the 1st prize.

SEEDLING FLORISTS' FLOWERS.—*Auriculas:* A 1st class certificate was awarded to Mr. James Dickson for a seedling named Dr. Horner, a grey-edged flower of good quality; tube rather large, but well filled with thrum, paste dense and pure, colour deep purple, pip flat; this flower promises well, but the specimen was not fully blown. A certificate was also given to J. Chapman, Esq., for a seedling self. *Pansies:* A certificate to Mr. Turner for a seedling named Example, ground colour bright yellow, margin of medium width, of a rich bronzy-purple, petals tolerably smooth, good eye. To Messrs. Bragg and Bright, for a seedling raised by Mr. Hunt, in the way of Rainbow, and named D'Israeli. The same to Mr. Thomson, of Iver, for Privateer, bright yellow ground, deep purple maroon; broad margin, round, large, and very even; fine eye. *Cinerarias:* 1st class certificates were awarded to several; the best was Atlee's Satellite, a bright crimson variety; and Ivery's Duchess of Sutherland, white, tipped with delicate lilac; dark disk; a pretty and well-formed flower.

Of MISCELLANEOUS PLANTS, a goodly number was assembled, and, generally speaking, they were produced in good condition, both as regards growth and bloom. The collection to which the Adelaide Cup was awarded was exhibited by Mr. Cole, gardener to H. Colyer, Esq., of Dartford. It contained some well-grown plants, among which may be mentioned Boronia anemonæfolia, Adenandra speciosa, two species of Ixora, Chorozema angustifolium, the white-flowered Dracophyllum gracile, a beautiful Erica Hartnelli, Boronia pinnata, and other plants.

HORTICULTURAL SOCIETY.

March 21.—A Banksian medal was awarded to Mr. Carson, gardener to F. G. Farmer, Esq., for a new Dendrobium, apparently a variety of D. Griffithi, but a striking one, the flowers being white, relieved in their centres by a broad patch of orange.—Messrs. Veitch and Son, of Exeter, sent a new Tropæolum, apparently an annual, raised from seeds received from the Andes of Cuenca; to the flowers of Moritzianum it added the foliage of canariense; a certificate of merit was awarded it. The same nurserymen also sent a small plant of their beautiful Rhododendron Javanicum, grafted on the common Tree Rhododendron, and a Camellia called Storeyi, for which a Banksian medal was awarded. The latter had a clean, somewhat ample, fine-looking foliage, and flowers like those of imbricata, but as full and finely imbricated as those of the double white.—Messrs. Loddiges, of Hackney, sent a nice collection of orchids, consisting, among other things, of Phaius Wallichii, the Brazilian Brassavola Martiana, Odontoglossum Cervantesii, several oncids, and two well-flowered specimens of Dendrobium macrophyllum, which is one of the more showy-flowered species, but whose blossoms smell incurably of rhubarb. A Banksian medal was awarded the Dendrobiums.—Messrs. Rollisson, of Tooting, sent a tall Begonia, from Oaxaca, apparently B. platanifolia, one of the best of the many varieties of Lycaste Skinneri, a small plant of Cyrtoceras reflexum, and Franciscea hydrangeæformis, with its pale variety. A certificate was awarded the Begonia.—Two Azaleas, not different from Gladstanesii, were produced by Messrs. Ivery, of Dorking; and from Mr. Low, of Clapton, came an Epacris, named bicolor, a seedling which had been raised by Mr. Willmore, of Birmingham.—Mr. Kendall, of Stoke Newington, produced a seedling Cineraria of great beauty, which was raised by him last year, and called Newington Beauty. A singular circumstance belonging to it, and which constitutes one of the principal characteristics of its beauty, is the fact of its never having, under any treatment, produced pollen. It belongs to the tricolor section, the points of the petals being a deep crimson-purple, with a centre of the same, surrounded by a well-defined belt of white. The absence of the yellow pollen not only improves the appearance of the centre, but from that circumstance the white is preserved perfectly pure, rendering the flower clean and attractive. A certificate of merit was awarded it. The specimen in question was grown and bloomed in Mr. Kendall's Polmaise house, from which also came cut specimens of Pelargoniums, which were again exhibited as evidence of the efficiency of this mode of heating, which Mr. Kendall has found perfectly suited for forcing such things.—Mr. Silver, gardener to the Rev. H. Pole, sent a cut specimen, in flower, of Weigela rosea, with a view to prove that this hardy plant (one of the best of Mr. Fortune's Chinese introductions) forces well. The plant was placed in a vinery, " at work," and, on showing flower, was removed to a conservatory, adapting itself to the most commonplace treatment. It need hardly be remarked that the colour of the flowers was much fainter than that of blossoms produced out of doors; but the flowers were equally numerous and large.—Of miscellaneous articles, Messrs. Warner and Sons, of Jewin-street, sent a garden-engine, whose novelty consisted in its having attached to the top of the tube a flat shovel-like plate, moving on a spring, for spreading the water. This invention was so contrived that tubes and plates of different sizes could be put on or taken off at pleasure.—Specimens of fabrics, made in Madagascar from the Raphia Palm-tree, were exhibited by Admiral Sir W. Gage. One was a mat of some beauty; the other was a striped cloth, which it was mentioned was probably prepared from the fibre of the leaf.—

From the Society's garden came various orchids and other plants. Among the former was the pretty little Orchis Branciforti, and a good specimen of Epidendrum Stamfordianum; and among the latter were Mr. Fortune's Forsythia viridissima, which has been found to force well, the golden-yellow flowers producing a fine effect, though unaccompanied by leaves; the sweet-smelling Trymalium (T. odoratissimum), Azalea obtusa and squamata, Echeveria rosea, whose red leaves and blossoms serve to enliven our glass houses at this season; and the true Greek Cyclamen (C. repandum), whose sweet-smelling purple blossoms render it one of the best spring-flowering plants we possess.—Seeds of Berberis asiatica, a half evergreen shrub, which has been found to be very suitable for cottage garden fences.

ON THE APPLICATION OF ALUM TO THE HYDRANGEA.

A LADY who is a constant subscriber to the CABINET, wishes to know if alum mixed in the earth of the Hydrangea will cause the flowers to be blue? what quantity is requisite, and how often to be applied. If alum will not turn them, what will? An answer in an early number will oblige.

CHARCOAL AS A MANURE.

WE have several times strongly recommended the application of charcoal in the compost for plants in pots. The following testimony is in addition to what has heretofore appeared :—

Chemically considered, carbon or charcoal, either prepared from wood or peat, may be said to derive its use as a manure from its property of absorbing moisture, as well as its power of taking up the different gases, particularly ammonia; charcoal, by absorbing moisture, keeps the soil sufficiently damp for the vegetation of the young plants, besides giving out its store of ammonia and other gases to assist in their future growth. Another valuable purpose to which peat-charcoal may be applied, is that of fixing the ammonia and other volatile bodies that arise from liquid manure; and it may also be used for the same purpose by mixing it with the common manure heap. A celebrated chemist says, "that wood-charcoal, reduced to powder, charred saw-dust, and charred peat, are all capable of being used with advantage in extracting the ammonical and other salts which give its value to the liquid of the farm-yards. Experiment has shown that, when filtered through a bed of such charcoal, the liquid escapes without colour, and almost without taste; while the charred peat or saw-dust is itself converted into fertilizing manure." We learn from men of science the theory of the use of charcoal as a manure; and practical men have, in many instances, proved its efficacy. Drilled with seeds, it is found to cause a quick vegetation, which is often the only thing wanting to secure a good crop, amazing productions have resulted from such application.—*Prize Essay.*

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

AGAIN the cheerful month of May is ushered in, and the gardens, hedges, and fields, begin to teem with all the verdancy and glowing tints of their floral treasures. The occasional return of frost, remind us that all danger is not positively passed over, and the floral cultivator must for a fortnight or three weeks longer exercise caution. This month is the usual period for planting out in masses, as well as promiscuously, those greenhouse and frame plants, as Geraniums, Heliotropes, Petunias, Verbenas, &c., which in consequence of their previous habitations will be somewhat tender, and the new shoots being delicate will be the more liable to receive injury by a slight frost, and such occurrences we have often known to take place even beyond the middle of May.

It is, however, very desirable to plant out, as early as possible, in order to ensure an early show of bloom, and have the beds, &c., covered entire. Where this system of adorning the flower garden is carried out to a great extent, and we observe it to be increasing every successive year, it is rendered proportionably difficult to give entire protection, so as to guard against casual frost and cold at night, but as far as is practicable, a covering of canvass, cotton, mats, or similar article, should be used; such may be elevated above the tops of the plants, by sticks stuck into the beds somewhat close, or by having rods bent over the beds, &c., upon which the covering may be thrown and secured down at the sides. Thus provided, the plants may safely be turned out into the open ground early in May, they will then be obtaining root-hold in the soil, and speedily cover the beds. An early removal of such plants into the open beds is sometimes very desirable, where the pits, frames, &c., are required for other purposes. Where there is ample pit, or frame room, then a delay is not a matter of importance on that account, and a continued growth of the plants in their warmer habitations will produce larger specimens when turned out later, but to turn out earlier and have the protection above stated secures a finer display, and the addition of extra potting, watering, &c., requisite while under pit or frame cover, will be obviated.

If any of the preparatory arrangements for planting out are yet incomplete, no further putting off should be indulged in.

Fresh loam, peat, and well rotted manure are essentials in due proportion, and if not already provided should be done without delay, we have always found fresh soil induced a finer bloom. With plants that are of a gross habit, less manure of course is requisite; exotic plants turned out, should never be gorged with fresh dung, it generally injures them. The less vigorous, and profuse blooming kinds may have more manure in proportion. If pots of cuttings, &c., late put in, are yet remaining unpotted, they should immediately be potted, if it be only for the space of a fortnight; they would then be pushing forth new roots, and by retaining the balls of earth entire, they much earlier form fine specimens in the beds than planting out at once out of the cutting-pot, as it is usually termed.

We are pleased to observe a more systematic and judicious arrangement of the plants as to heights, colours of flowers placed in contrast, &c., is attended to, so as to obtain, as much as possible, one harmonious whole, and that to be as striking in show as the flowers will accomplish.

Where hardy Annuals have come up too numerous, they should be thinned out, so as to retain but enough to be vigorous. Those kinds of tender Annuals, as Asters, Marigolds, Stocks, &c., raised in pots or frames, should be taken with as much soil to the roots as possible, and by the middle of the month, be carefully planted out, secured, &c., as requisite. Dahlias must be planted out as early as convenient, covering them overhead by a garden-pot, or piece of brown paper secured around the entire plant, during night, till fear of danger from frost is over. A portion of fresh loam and well-rotted dung is highly beneficial to their success. *Hyacinths*, *Ranunculuses*, *Anemones*, and *Pinks* in beds, will require due attention to watering, protection, shading, &c. Thin away the stems of pinks to two, or at most three, of those plants where the flowers are for showing, &c. Ranunculus-beds must have a good supply of soft-water in order to ensure success. Water given twice a-week to sink to the bottom of the roots is better than a little given every day, which only moistens the surface. Read articles on the general culture of these plants in previous numbers of our Magazine.

IN THE FORCING FRAME.

Attention to striking cuttings of stove and greenhouse plants, and in potting off such as are struck, is necessary *now*. Exotic seeds may be sown, Seedlings potted off, &c.

IN THE COLD FRAME AND GREENHOUSE.

Plants in these structures which are designed for turning out in beds, must have abundance of air to get them inured to the open border circumstances. Although abundance of air has been admitted, yet the plants will certainly have pushed shoots, and of course be, especially with delicate kinds, tender, and, in proportion, susceptible of injury by removal into the open air. It is best to keep the plants in, and give all possible air requisite, till after the expiration of the third week in May, rather than hazard them by a week or two earlier removal, in combating the vicissitudes of our varying climate, even at this period. A deep floor of coal ashes should be formed on which to place the pots, so as to preserve the roots from worms. After the pots are placed even at the surface, so as to hold water regularly, moss placed lightly between the pots, as high as to the rims, keeps the soil in a more even condition, and the roots at the sides of the pots are not scorched by powerful drying temperature. What are termed Greenhouse Annuals, as Balsams, Globe Amaranthus, Salpiglossis, Brachycomas, Rhodanthes, Browallias, &c., will replace the stock removed; attention to their preparatory growth is requisite, so as to have fine substitutes.

If Camellias have set their flower-buds fine, they should be removed out into the open air where the other plants are, or be placed where they can have a free admission of air by day, in a cool part of the greenhouse, or what is better, a pit-frame. Re-pot any plant which requires it, and never defer to, what is often done, a general shifting, to the great injury of the specimens. Syringing over head will now be beneficial. As soon as green fly makes its appearance, destroy them by smoking the house or individual plant. Pelargoniums will now be coming into bloom, shade the flowers with a slight canvass covering. See articles in former Volumes, on general culture. Cinerarias should be shaded too, if the colours are to be kept pure, as they fade in hot sun.

IN THE STOVE.

Achimenes should now have special attention to produce fine specimens. Gesneras, Amaryllis, and specimens of Clerodendron, Ixoras, &c., for showing, must also have constant attention, as we have before directed.

ON BLUE HYDRANGEAS.

BY A. B.

A CORRESPONDENT having recently inquired, "How am I to cause the Hydrangea to produce blue flowers," I beg to say that the soil being watered with diluted chamber-lye will effect the desired object.

TO DESTROY THE RED SPIDER IN PLANT-HOUSES.

BY J. W.

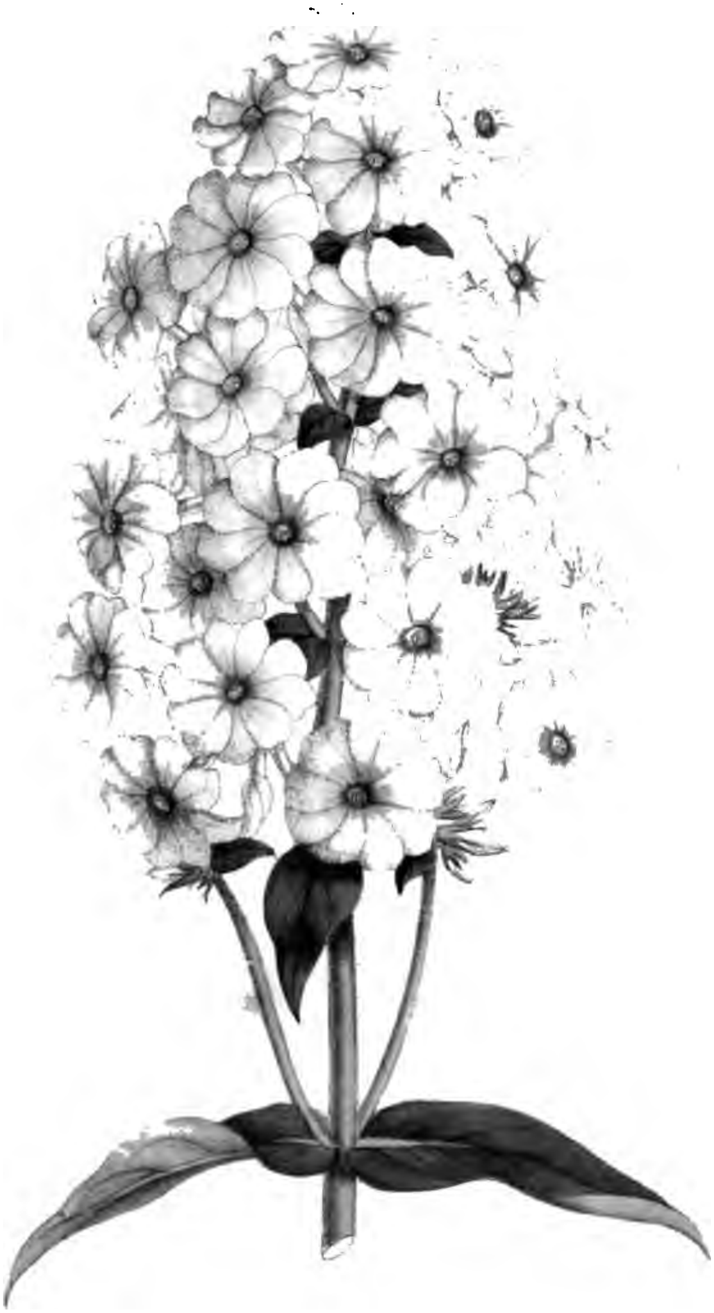
IN the month of February or March, when the houses are whitewashed, put to about every four gallons of whitewash twelve ounces of sulphur vivum; then wash the whole house over with it, taking care not to come nearer the furnace end of the flue than six or seven feet, or, when strong fires are made, the effluvia will rise too powerfully, and probably injure the plants. The best way is to wash close to the furnace over with plain whitewash.

BRIEF NOTES AND CORRESPONDENCE.

LONDON HORTICULTURAL SOCIETY'S MEETING IN REGENT STREET, APRIL 18TH. —Amongst new plants, Messrs. Veitch and Son, of Exeter, sent a portion of a plant in a pot of the same handsome Fuchsia, a flower and a leaf of which was exhibited at the last meeting. It was stated to be not different from the Fuchsia loxensis of Humboldt and Bonpland, found on mountains in Peru, at elevations of from 6000 to 7000 feet, which elevations nearly correspond with those given by Mr. Lobb. The inspection of a better specimen only served to confirm the opinion that it will form one of the handsomest Fuchsias yet in cultivation; its dark green leaves and brilliant scarlet flowers, with which the white lobed stigma nicely contrasts, rendering it exceedingly attractive. It was mentioned that in its native habitat it grows from two to four feet in height. A large Silver Medal was awarded it. Messrs. Veitch also received a Certificate of Merit for a plant of the Pear-leaved Periphragmos (P. pyrifolia), a Peruvian Phloxwort of great rarity, but whose cream-coloured flowers, though produced in abundance, are too dingy-looking to render it a plant of first-rate character.—Mr. Kyle, gardener to R. Barclay, Esq., sent a specimen of Eriostemon neriifolium, for which a Knightian Medal was awarded. Than this, for its size, it was perhaps impossible to produce a better specimen of good gardening. It formed a dense pyramid nearly five feet high, profusely clothed with white starry blossoms to the very pot. A Banksian Medal was awarded to Mr. Glendinning, of the Chiswick Nursery, for a tall specimen of Henfreya scandens, a stove climber of rather recent introduction, and of considerable beauty, but its white flowers are hardly pure enough; a deficiency made up, however, by their quantity and the length of time they continue to expand in succession. From the Marchioness of Westminster was a coloured drawing of a curious and beautiful Rhododendron, named Barbatum, which has lately flowered for the first time in this country at Eaton Hall in Cheshire. It was stated to have been obtained from the north of India; but unlike the Indian species, which generally have loose heads of flower, if we except the Ceylon R. zeylanicum, its flower-heads were close and compact, the individual flowers being short and round, and freer from spots than most other Indian kinds. The specimen from which the drawing had been made had been bloomed in a conservatory; but it was observed that it would no doubt prove as hardy as other sorts from the same quarter,

PANSIES, DAMPING OFF, &c.—I had some plants put in small pots, and placed in a frame for winter protection, I found them damping off. I soon found out the cause and remedy: I closed up the sashes at night, and the result was mildew and death. I gave all air in suitable weather both day and night, in the latter case the sashes were raised up, so that a space four inches deep at top and bottom were allowed for a current to pass through: my plants soon began to flourish. Such as were strongly affected by mildew, I sprinkled over with sulphur; the disease was removed by it, in unison with the free admission of air. A similar attention to Carnations and Picotees, to prevent or cure the plants of mildew, is essential, so I have found it.—*C. Webb.*

ALLAMANDA SCHOTTII.—I beg to furnish a few particulars respecting the Allamanda Schottii. The seeds from which I raised the plant, beautifully figured in the *Botanical Magazine* for February last, was collected in Brazil, in the beginning of 1846, but in what precise locality I am not prepared to state, by Gordon Graham, Esq., of Brighton, who most kindly presented them to this establishment. The plant from which the fine and correct drawing was taken is now in the hands of Messrs. Lucombe, Pince, and Co., of Exeter. It flowered here for the first time in the early part of July, 1847, continuing to expand its splendid bright orange-coloured flowers without intermission until the first week in January last, having frequently from five to six expanded flowers upon a panicle at the same time, making a grand appearance; even the dark, sunless days of November and December did not in any measure deteriorate the colours of the flowers. It is a plant of fine habit, and vigorous growth. The one under my management last season covered an area of upwards of fifty superficial feet, closely trained, and existed in an eight-inch pot whilst under my charge; though I would suggest that its habits in every respect qualifies it to be grown a most complete shrub, by a little attention to stopping while the plants are young, there being but little similarity between the habit of A. Schottii and A. cathartica, the former having an erect, and the latter a climbing stem; the flowers also of the former are fully twice the size of the latter. I feel fully convinced that it cannot fail to give the utmost satisfaction to growers, and will more than realise all that has been advanced in its favour. Sir W. Jackson Hooker, in one of his communications to me, says the flowers are most truly magnificent, far superior to any A. cathartica he ever saw. It merits a place in every collection of choice stove plants, and cannot fail to excite the admiration of all who behold its lovely flowers; those persons who saw it in flower can testify to the truth of this statement. I have a plant just now showing flower, that has not yet bloomed, from the same seed as A. Schottii.—*James Stanton, Gardener to R. W. Burton, Esq., Springwood, Manchester, in Gardener's Journal.*



Imbricata.

JUNE, 1848.

ILLUSTRATIONS.

PHLOX IMBRICATA.

WE obtained this very singular and handsome variety from Mr. Van Geert, florist, of Antwerp. It was raised from seed which had been collected from Phlox omniflora. Each blossom of a Phlox usually has but five petals; those of the one we now figure have from nine to twelve. From this circumstance it had been represented (incorrectly) on its first time of blooming, to be a double one, but its specific title, descriptive of the petals laying tile-like over the edges of others, is very appropriate. The plant grows about two feet high, vigorous, blooming very profusely, and, with its large heads of flowers, is highly ornamental.

The entire family of Phloxes have a peculiar claim to cultivation, being (almost without exception) quite hardy, easy of culture, readily increased by division or seed, of numerous colours and variety in shading, stripes, &c. Many of them diffuse a very delightful perfume for a considerable distance around, and the tribe includes those which commence blooming early in March, and others flower in continuous succession till November. The one we figure well merits a place in every flower garden.

NOTES ON NEW OR RARE PLANTS.

AGALMYLA STAMINEA—LONG-STEMMED.

Mr. Lobb discovered this plant growing in humid parts of mountain woods in Java. Messrs. Veitchs exhibited a plant in bloom at the Horticultural Society's rooms in Regent-street, London, on a recent occasion. The flowers resemble those of an Æschynanthus. The flowers are borne in dense fascicles, about fifteen in each cluster, of a rich scarlet-red; the inside of the tube is of a dark colour. A separate flower is about an inch and a half long. It requires to be grown in the stove, and to be cultivated as the Æschynanthus are. (Figured in *Pax. Mag. Bot.*)

ALLOPLECTUS CONCOLOR—WHOLE-COLOURED.

An inhabitant of Brazil, from whence it was sent to the Royal Gardens of Kew. It is a stove plant, shrubby, growing about two feet high. The flowers are tubulous, bellying much, hairy, of a rich orange-scarlet, and about an inch and a half long. It is a very neat and interesting plant. (Figured in *Bot. Mag.*, 4371.)

CASSELIA INTEGRIFOLIA—ENTIRE-LEAVED.

It is a stove plant, a native of Brazil. It is a shrubby, evergreen plant. The flowers are produced in loose racemes, four to six in each, and several racemes at the ends of the branches. The corolla is funnel-shaped, about three-quarters of an inch long, and as much across the mouth, of a delicate purple-blue. The inside of the tube is yellow. It is a very neat and beautiful flowering plant.

ECHINOCACTUS CHLOROPTHALSNUS—GREEN-EYED.

It is a native of Real del Monte, in Mexico, and has recently bloomed in the fine collection of this interesting tribe at Kew Gardens. It is of the globe form, as large as a good sized orange. The flowers are produced at the crown, three inches across, of a pretty lilac-purple, and the centre of anthers yellow. The stigma, several of them, are of a rich green, and form a very distinct eye. It is an interesting species. (Figured in *Bot. Mag.*, 4373.)

ECHINACEA INTERMEDIA.

It is a native of the cooler parts of Mexico, a hardy perennial herbaceous plant, which grows about two feet high, and blooms freely from June to November. The flowers are very showy, having much the appearance of single Dahlias or Rudbeckias, of a rich reddish-purple and lilac about five inches across. It is in the collection of Messrs. Backhouse, of York. It well merits a place in every flower garden.

STIGMAPHYLLON CILIATUM.

A native of Brazil, where it grows abundantly in the forests and thickets. It is a twining evergreen shrubby plant, requiring to be grown in the stove. It has recently been in bloom in the collection of Messrs. Knight and Perry, of King's-road Nursery, Chelsea. The flowers are borne in umbels having from three to six in each: they are of a bright orange-yellow colour, fringed at the edges, about three-quarters of an inch across. (Figured in *Pax. Mag. Bot.*)

At the Royal Gardens of Kew.

BEGONIA HOMONYNI.—The plant grows two feet high, bushy, and the flowers are pure white, which, in contrast with the yellow anthers, produces a very pretty effect.

Begonia Fischerii.—The upper side of the leaves green, but the underside is of a bright red. The flowers are pink. The plant contrasts strikingly with the entire green kinds.

Gloxinia Handleyana.—We figured this handsome variety in a former volume of this Magazine; and, having been favoured with the plant from the very respectable gardener who raised it, we had the pleasure first to send the variety out to the public.

Some fine specimens are in bloom, and its pure white, in contrast with the bright crimson throat, renders it very beautiful.

Gloxinia albo-coccinea.—The flower is a flesh-coloured ground, with a light, and also a rich dark, crimson throat. It is a pretty variety.

Gloxinia Teuchlerii.—A bright rose, with a tinge of pink, and a streak or streaks of blue lengthwise. The inside of the tube, at the lower part, is of a deep rosy-red.

(We saw a small specimen exhibited at the Horticultural Show at Chiswick on May 20th by Messrs. Rollissons, with two flowers both striped with blue; but at Kew, and in our collection at Richmond, it occasionally has a flower wholly of a bright rose. It is a very pretty variety.)

Gloxinia speciosa rubra.—A deep rosy-red, with a crimson-red inside. It is much superior to the original G. rubra.

Gloxinia (a new species).—The plant is of a dwarf habit. The flowers are produced on stems three inches long, erect. The tube is about an inch long, pure white, and the expanded mouth is about three-quarters of an inch across and of a rich violet colour. It is a very interesting and pretty species.

Prostranthera lasianthus.—This is a neat, greenhouse, dwarfish, shrubby plant; the flowers are borne in branching heads, white, with purple spots inside the tube. It blooms profusely, and is very ornamental, and well deserving to be an inmate of the greenhouse, where it would long continue a pretty object.

Boronia denticulata.—This well-known plant was in profuse bloom, its lilac and white flowers making a fine show on such dwarf bushes. It is neat and pretty.

Epacris lævigata.—The flowers are bell-shaped, large, of a pure white, and borne in profusion. It ought to be in every greenhouse.

Acacia pulchella.—This is one of the late flowering class, and continues long in bloom. The flowers are of a brilliant deep yellow, in profusion, and with its handsome mimosa-like foliage renders it very pretty. Being a dwarfish bush it is very suitable for the greenhouse.

Bignonia speciosa.—The tube is about two inches and a half long, a pure white; the limb is three inches across when fully expanded, of a lavender colour, streaked with violet. The inside of the tube is white. The plant was trained to a circular trellis about four feet high. It is a very beautiful species, well deserving cultivation.

Helichrysum purpureum macranthum.—The inside of the flower when expanded is rose colour, with a rich yellow disk. The outside of the flower is a rich deep crimson. It is not equalled by any other we have seen.

Gardenia Stanleyana.—In the stove a plant was in fine bloom, having thirty-six flowers upon it. It is a fine ornamental plant, well meriting cultivation.

Camellia caryophylloides.—The carnation striped flower fully bears out the specific name given it. It has a blush-coloured ground with rose stripes. It is a fine double variety, and a beautiful acquisition.

Verbena (Duchess of Northumberland). — This is a seedling just bloomed for the first time. It is a beautiful peach-blossom colour, good form, and the flower when fully expanded is the size of a shilling.

Verbena (Snowball).—A pure white, good size, and of first-rate form, superior to any other white we have seen, and will be a valuable variety.

CAPE HEATHS.

At the Horticultural Exhibition held at Chiswick Gardens on the 20th of May, a vast number of splendid specimens of this lovely tribe of plants were exhibited. We carefully looked over the entire, in order to insert a list of a few of what we considered the best kinds, such as ought to be in every collection. In the "Gardener's Chronicle" of the same day, the following observations appear on Cape Heaths, being one (No. 9) of a series of papers upon them, (the newspapers in which they are ought to be procured by all heath growers,) and being so appropriate to the object we had in view in making a selection, we extract therefrom the following particulars;—

"By the courtesy of a lady some time resident at the Cape, I have been enabled to inspect several portfolios of drawings from nature of some hundreds of Ericas, drawn from specimens gathered in their native habitats. I would not venture on my own knowledge of the genus to assert, but I think I might do so without much fear of erring, that our collections cannot boast of such beautiful species as yet remain to be introduced; or, if introduced, have never been sufficiently developed to command attention. But the object of this paper is to point out a few of the more beautiful varieties; and first as to Bergiana. I might throw down the pen in despair of doing justice to its merits as an ornamental plant of the first rank, where chasteness and elegance triumphs over the mere love of the gaudy. Elegant in the superlative degree it most assuredly is. Hogarth's 'line of beauty' is exemplified a thousand times in the disposition of its branches. To give an idea of the profusion of its blossoms, is to say they equal in number its leaflets, numerous as they are. Imagine a branch bending in a graceful curve a foot in length, again this branch clothed with a numerous progeny of delicate ramifications, and these subdivided into numerous pedicels, each bearing a pendent purple globule; dispose a number of such branches into the most graceful group that fancy can depict, and you can form some idea of what a well-grown specimen of Erica Bergiana would be. Cavendishii may be noble, the ventricosa beautiful, odore rosæ may be chaste, and the vestitas grand; but Bergiana is more, it has every superlative of beauty combined—it is elegant. The man who shall produce a large well-grown specimen of Erica Bergiana will have produced that which will command attention from the most fastidious of plant connoisseurs. I know not why it is, but in few lists of exhibited specimens either in the metropolitan or provincial shows have I observed the species under notice.

"I have said Cavendishii is noble; it is the very aristocrat of Ericas. Rich in colour, compact in habit, symmetrical without formality, easy to cultivate, a free and lasting bloomer; these all combine to render it a desirable variety for general cultivation. As a hybrid between depressa and Pattersonii it affords us an insight into what might be expected from judicious hybridisation. It combines with a greater profusion of bloom than Pattersonii the compact habit, large blossoms, and much richer colour of depressa. The former is somewhat inclined to nakedness, and the latter is too scanty in the production of its blossom to render it a conspicuous object.

"Perhaps as a fitting companion for Cavendishii, and contrasting admirably in colour, intermedia may not be inappropriately named. Its rich imbricated spikes of blossom, white and sufficiently transparent to render the position of the inclosed anthers visible through the tubular corolla, render it a conspicuous and beautiful object. It will produce blossoms in such profusion as to clothe the flower-stalk for the length of three or four inches with a dense mass of spotless purity. It is a near relation to Bowieana, but an unquestionable improvement upon that desirable variety. Both the last-named are very liable to the attacks of aphids. These pests locate themselves amongst the embryo flowers, and if timely measures are not then taken, malformation of the individual flowers is sure to take place.

"A very hydra of beauty is the genus Erica. No sooner have you disposed of what may be termed the principals, than up start others even more formidable than they. Mirabilis defies alike both pen and pencil faithfully to pourtray it. Its thick, wax-like, limbate petals, on the one hand, and its changeable hue on the other, render such a consummation, although 'devoutly to be wished,' utterly impossible.

"The flowers of mirabilis are produced only on the tips of the shoots, each bearing four; it may thus be imagined that, on looking perpendicularly on a compact specimen, a gorgeous mass of beauty presents itself; in fact, a complete sheet of blossoms. Towards the close of the growing season it sometimes happens that a disease destroys the extreme points of many of the shoots; when such happens, the blooms are destroyed in the embryo state, and much of the future beauty of the plant is destroyed.

"A plant less conspicuous than the last, but exercising great claims upon our notice, is rubricalyx. The pale tubular petals, contrasting strongly with the rich, dark calyx, render it a pleasing object to look upon. It is a very free bloomer, and remains a long time in beauty.

As the petals fade, they change to a somewhat dingy red; the intermediate colours, however, are pleasing, and the mutations will be watched with pleasure. There is one circumstance which is apt to detract from its beauty; it is apt to make luxuriant shoots. The flowers on the branchlets near the base are frequently abortive."

ON THE FORM OF THE TULIP.

In former volumes we have inserted most valuable articles on the Tulip from our respected friends, and celebrated tulip growers, Mr. W. Harrison and Mr. J. Slater. The subject of form has recently occupied the attention of a writer in the "Midland Florist," who observes: "Experience, therefore, teaches us that the most perfect, and consequently the most beautiful tulip, is that which presents to us the most perfect uniformity of outline, combined with a corresponding uniformity in the character and arrangement of the coloured forms depicted upon it. In tulips with round cups and straight margins, however, there can neither be uniformity of outline nor harmony with the coloured forms; and believing every rule to be defective which does not provide for this best of all properties, I have long since embraced that which requires the upper margin of every petal to present a curve, equal in its radius to half the diameter of the flower, when in its greatest perfection. This is a high standard when conjoined with the half-globular cup; and whenever attained, we are sure to find exactness of proportion in every part, which, in an object of such simple form as the tulip, is essential to its perfection. It also possesses the additional advantage of being easy of application, whenever petals of unknown varieties are submitted to our inspection; and if we adopt the following mode of proceeding, much tedious calculation may be avoided:—A single petal will suffice, though it is always better to have two (one split up halfway from the heel, the other from the centre of the margin); because these would enable us to trace the outline on paper with greater accuracy, which is the first thing to be done. We then draw a line perpendicularly down the centre, adding about one-tenth of an inch, for half the thickness of the stem. If we now divide the whole length into eleven parts, whatever may be the length of the petal, seven of these parts, measured from the tip, will exactly give us the radius of the curve, which the outline of the flower itself, and the upper margin of each petal ought to have; and, with the aid of a pair of compasses, we may correctly determine the quality of the tulip itself, in point of form.

"Before closing my observations, it may perhaps be desirable to reduce the principles we have been discussing to the form of rules, for our future guidance; and I believe we may safely adopt the following, as comprising the most natural description of 'What constitutes perfection of form in the Tulip:'—1. Every tulip, when in its greatest perfection, should be circular in its outline throughout; its depth being equal to half its width across from the tip, or highest point, of one petal to the tip of the other immediately opposite. 2. It should be composed of six petals, three inner, aud three outer, which should all be of the same height, and have such a form as will enable them to preserve this circular outline; their edges being even, stiff, and smooth; and their surfaces free from shoulder, or inequality of every kind. 3. The breadth of the petals should be amply sufficient to prevent any interstices being seen between them, so long as the flower retains its freshness. 4. There should be exact uniformity between the outline of the cup and the outline of the upper margin of the petal, which should form an arc or curve whose radius is equal to half the diameter, or whole depth of the flower. In the standard of form here recommended, some new points will be found deserving of notice. Being wholly founded on principles in accordance with the economy of nature, it will the more surely abide the test of time; and so long as the symmetrical arrangement of equal curves shall be considered more graceful, and more fascinating to the eye, than a motley combination of curves and straight lines, so long, there is reason to believe, it will be deemed worthy of universal adoption."

BLOOMING MIGNONETTE IN WINTER.

Few flowers are more esteemed for bouquets in winter and early spring than the sweet-scented Mignonette; it is also very useful for the decoration of the drawing-room and conservatory at those seasons of the year. Although the Mignonette is not a delicate plant, yet it is not generally seen in the perfection to which it might be brought by the simple method of culture I am about to describe. To flower at or soon after Christmas, the seed should be sown in the beginning of August, in pots of any convenient size. The soil should be good loam, moderately enriched with rotten dung, and kept open by a pretty liberal intermixture with old mortar or lime rubbish. It is essential that the pots be thoroughly drained, and upon the drainage a handful (more or less, according to the size of the pots) of one year old pigeon's dung should be placed. After sowing the seed, set the pots where they will not require frequent waterings, too much moisture being extremely injurious to Mignonette; for this reason, therefore, it will be safer to place the pots in a frame or pit, where they may be covered by the lights in rainy weather. As the plants increase in size, they should be gradually thinned, ultimately leaving three or five in each pot. The principal point to be attended to now is judicious watering; by this I mean giving water only when the plants really require water, and then in sufficient quantity to moisten the whole of the soil, not dribbling a few drops over the plants to-day, to prevent them from being dry to-morrow, a practice too much followed with plants in pots. Pinch off any premature flowers that may appear, keep the pots free from weeds, and far enough asunder to prevent the plants from being crowded, and when they are removed to winter quarters, set them near the glass, in an airy situation. A few of the plants might be placed in an intermediate house, or other situation, rather warmer than a greenhouse, to come into bloom a little earlier than the rest. I have recommended the seeds to be sown in the pots, which is the method I prefer; but, if more convenient, a sufficient number of self-sown plants might be taken up and potted; only a few extra should be put in to allow for casualties, as the Mignonette transplants badly. The best Mignonette I ever saw grown was treated in this way; but as it is not every gardener that can procure pigeon's dung, I may add that guano will be found an excellent substitute. This admirable fertilizer must, however, be applied in a liquid state, and not before the pots have become well filled with roots, when a small quantity of guano, given at intervals of a week or so, will increase the vigour of the plants in an extraordinary degree. A second crop might be sown in the beginning of September, and managed in the same manner. Single plants will attain a large size in six-inch or eight-inch pots, if the main branches are pegged down as they grow, and the flowers are kept pinched off for a time.—(*Whiting, in Journal of Horticultural Society.*)

MANAGEMENT OF SEEDLING RHODODENDRONS AND AZALEAS.

BY MR. FREDERICK THORNE, OF TOTTENHAM PARK GARDENS, IN WILTSHIRE.

PERHAPS there are but few hardy American plants growing in the pleasure-ground which, when in bloom, display a more noble and beautiful appearance than the Rhododendrons and Azaleas; and, even when not in bloom, but at all seasons, the former-named plants produce a lively effect; even during the winter, the dark green foliage forms a very striking contrast to its leafless neighbours.

The raising varieties of the Rhododendron and Azalea from seeds is a very pleasing and interesting occupation. Where there is a collection grown, it affords facilities to those persons who delight in prosecuting such a delightful practice. Unfortunately, there are but few situations where these lovely plants will thrive in the natural soil of such places. A sandy-peat is the only soil in which they can be grown to perfection.

At this place (Tottenham Park), and in the surrounding neighbourhood, they grow as luxuriantly as the common Laurel, although a great part of the soil is composed of a dark sandy peat-like mould, which is not of the best quality, and upon a cold clayey subsoil; the plants, however, appear in their natural element.

The seeds are gathered, in a dry condition, during December and January, and if the seedling plants are required early, they must be sown in February, in sandy leaf-mould and peat, finely sifted, using shallow pans for sowing in, and after the seed is sown placing them in a moist temperature, at about 60°, gradually increasing it to 70°, and be so situated as to be slightly shaded. I always prefer having them underneath the shade of vines, especially when the seed is vegetating. As early as possible after the seedlings are fairly up, they are pricked off into pans having soil of a coarser quality than that in the seed-pan. Grow them in this manner for about two years, subjecting them to a cool temperature during winter, just sufficient to exclude the frost. At the close of the two seasons' growth, an elevated bed is prepared, fully exposed, in a sheltered southern aspect. The bed is composed of the best materials, and thoroughly drained. On this the seedlings are carefully planted, and remain undisturbed till their blooming merits are ascertained. The best kinds are retained for special purposes, and the remainder are planted out in plantations as common underwood.

By judicious impregnation of some of the finest sorts, very many superb, distinct varieties have been raised, which now form some of the noblest and most beautiful ornaments of our pleasure-grounds.

The Rhododendron and Azalea are invaluable for forcing when cultivated in pots in heat, and greatly contribute to beautify the conservatory during the early months. These plants are not, however, like the Rose, able to contend with early forcing for years successfully. When a profusion of bloom is obtained one season, through early excitement, another year is required for them to recover from the effects of the operation, and to promote the growth of young wood, which is to produce the flowers the next season. Where a provision is made of a few dozens of plants, divide them into two lots, and force one portion only in one season, so that a constant stock will be provided for every year. In forcing operations they require a similar treatment to the Rose.

FLORAL EXHIBITIONS.

ROYAL BOTANIC SOCIETY.

THIS Society held its first flower show for the present season on May 10, and 5826 visitors were admitted. The specimens exhibited were in fine condition.

The NEW PLANTS are perhaps those to which the greatest interest attaches, and of these there were several deserving particular notice. Messrs. Veitch and Son, of Exeter, were, as usual, large contributors to this class. A silver medal was awarded to them for the beautiful yellow-flowered variety of Rhododendron javanicum (R. j. flavum) which has been already noticed in this journal. Small silver medals were also awarded them for a species of Boronia from Swan River (? B. spathulata), a free flowering plant, with obovate glaucous leaves, and pale rosy-pink blossoms; Cantua dependens; Siphocampylos pubescens, apparently a dwarf soft-stemmed species, with largish rough ovate-acuminate leaves, and conspicuous rosy-purple axillary blossoms; and Hoya cinnamomifolia, a stove climber, with fleshy cinnamomum-like leaves, and umbels of green and purple flowers. Medals of the same value were assigned to Messrs. Rollisson, of Tooting, and to Mr. E. G. Henderson, of St. John's Wood, for Gardenia Fortuniana, with large double white flowers; to Mr. Kyle, gardener to R. Barclay, Esq., Leyton, for Eriostemon neriifolium, a handsomely grown specimen; and to Messrs. Henderson, of Pine Apple-place, for Pimelia Weippergiana, a white-flowered kind, of considerable merit. Bronze medals were also awarded to Messrs. Veitch, and to Mr. E. G. Henderson, for Statice frutescens, a shrubby species, from the Canaries, in the way of arborea, but altogether smaller; to Messrs. Henderson, for Phlox frondosa, a low tufted plant, in the way of P. subulata; and also to the same for Dillwynia Henchmanni. Besides these there were exhibited, by Messrs. Veitch, Statice imbricata, a species introduced many years since from Teneriffe; by Messrs. Henderson, Stylidium androsaceum, a Swan River plant, like an Androsace, with cream-coloured flowers; Leptospermum bullatum; and Indigofera amæna, a Cape shrub, long since introduced.—Of plants of historical interest, or possessing fine foliage, two were shown: a prize was awarded Messrs. Veitch for the Upas tree (Antiaris toxicaria), and another to Messrs. Rollisson, for Ardisia mexicana.

Of ORCHIDS, large collections were contributed by Mr. Mylam, gardener to S. Rucker, Esq., Wandsworth, and by Messrs. Veitch, the former of whom received the first, and the latter the second prize.

Of miscellaneous collections of STOVE and GREENHOUSE PLANTS, there were three collections of thirty, two of twenty, and nine of ten plants each. In the former, the competitors were Mr. Fraser, Lea Bridge-road (1st prize), Mr. Green (2nd prize), and Mr. Pawley, Bromley (3rd prize). The two former had much the best plants, and of these, Mr. Green's were less evenly-sized and compactly grown than Mr. Fraser's. Among his plants we remarked Pimelea diosmæfolia, measuring 4 feet high and as much through; Mrs. Lawrence's Chorozema; a huge C. varium nanum; a finely-flowered Bossiæa disticha plumosa; Zichya inophylla; a pyramidal Eriostemon buxifolium, 4 feet by 4; Dillwynia pungens; a nice plant of Boronia pinnata; Polygala acuminata, 4 feet by 4; Ixora grandiflora; a variety of the Holly-leaved Chorozema in good condition, together with C. Dickensoni, Boronia serrulata, Podolobium staurophyllum and trilobatum, Eriostemon neriifolium, various Heaths and Azaleas. —Mr. Green, gardener to Sir E. Antrobus, bart., of Cheam, obtained the 2nd prize, and Mr. Pawley, of Bromley, the 3rd. The more remarkable of Mr. Green's plants were Erica aristata major, quite a gem, the yellow-flowered Gompholobium splendens, Pimelea spectabilis, Aphelexis humilis, Eriostemon buxifolium, hardly sufficiently advanced in flower; Tetratheca verticillata, beautifully bloomed; a tall Zichya inophylla floribunda; Knight's Azalea optima, a splendid variety; Dracophyllum gracile; various Heaths and tall Azaleas.

Collections of twenty plants were sent by Mr. Cole, gardener to H. Colyer, Esq., Dartford (1st prize); and by Mr. Pamplin, Lea Bridge-road (2nd prize). Mr. Hunt, gardener to Miss Traill, Bromley, produced the best collection of ten plants; these were very large specimens, and densely bloomed. The next best came from Mr. Kyle, Leyton, and in this were a fine bush, a yard through, of Bossiæa disticha, a handsome cone-shaped Eriostemon buxifolium, and dense moderate-sized plants of Boronia pinnata, Erica ventricosa carnea, and Pimelea Hendersonii. The third came from Mr. Taylor, gardener to J. Coster, Esq., of Streatham.

The CAPE HEATHS were very numerous, and mostly exhibited superior management. We noticed two collections of fifteen, six of twelve, and nine of six plants each. The best large collection was from Mr. Hunt, who had fine plants of perspicua nana, delecta, elegans, denticulata moschata; Clusiana, a pretty variety, with long, flesh-coloured tubes; aristata major, hardly forward enough; vestita alba and vasiflora, the latter is one of the best of the small-flowered kinds. In Mr. May's group the more remarkable sorts were aristata major, nitida, Hartnelli, Cavendishii, propendens, and Sprengelii; the latter is a distinct, waxy-flowered variety, and very pretty. Collections of twelve plants were shown by Messrs. Fairbairn, Rollisson, Fraser, Veitch, Epps, and Pamplin. In the first group were nice plants of Hartnelli, Beaumontia, denticulata moschata, vestita alba, Cavendishii, and ventricosa coccinea minor. In the second, Westphalingia, ventricosa alba, Cavendishii, not sufficiently in bloom, and mirabilis. In the third, persoluta alba, intermedia, and perspicua nana. In the fourth, tricolor verna, a distinct and fine variety; florida campanulata, tortuliflora, and delecta: and in the fifth, propendens, and denticulata moschata.

Concerning ROSES in pots, too much can hardly be said, for seldom have we seen better collections. The flowers were large and fine, and the foliage clean and healthy. The 1st prize for twelve plants was awarded to Messrs. Lane, for Duchess of Sutherland, Louis Bonaparte, Baronne Prevost, Armosa, Mrs. Elliot, Aubernon, Adam, Grand Capitaine, Lane, Duc de Chartres, Miellez, and Lady Alice Peel; 2nd prize, Messrs. Paul, for Cels multiflora, Comte de Paris, Louis Bonaparte, Mrs. Bosanquet, Madame Laffay, Armosa, Paul Perras, Madame Lacharme, William Jesse, Baronne Prevost, Taglioni, and Aubernon; the 3rd prize to Mr. Francis, of Hertford, for Aubernon, Souvenir de la Malmaison, Triptoleme, Coupe d'Hebe, Goubalt, Madame Laffay, Mrs. Bosanquet, Duchess of Sutherland, William Jesse, Armosa, Bouquet de Flore, and Comte de Paris. A 3rd prize was also awarded to Mr. Dobson, gardener to Mr. Beck, for Louis Bonaparte, General Allard (very fine), Felicité, Eugene Beauharnais, Comte d'Eu, Duchess of Sutherland (bearing nine open blossoms), Augnstine Mouchelet (with eighteen ditto), William Jesse, Mrs. Bosanquet, Madame Laffay, and Princesse Helen. Mr. Rowland, of Lewisham, showed Comte de Paris, William Jesse, Madame Laffay, Armosa, Mrs. Bosanquet, Baronne Prevost, Caroline, and Fabvier. Of Yellow Roses, Mr. Lane produced Venusta, Banksia, Harrisonii, Nisida, Solfaterre, and Vicomtesse de Cazes. The 2nd prize for Yellow Roses was awarded to Mrs. Paul, of Cheshunt.

SPECIMEN PLANTS.—A 1st prize was awarded to Mr. Clarke, Muswell-hill, for a magnificent bush of Pimelea spectabilis, of large size, and in perfect bloom. Mr. Kinghorn was awarded a 2nd prize for a good P. spectabilis; and awards of the same value were made in favour of Messrs. Henderson for a dwarf densely-grown and freely-bloomed Boronia pinnata, and to Mr. Frazer for an immense bush of Chorozema Henchmanni, in very fine condition. Besides these, prizes were awarded to Messrs. Veitch, for a good showy plant of the new hardy Weigela rosea; to Mr. Pamplin, for Pimelea spectabilis; to Mr. Fraser, for Boronia serrulata; and to Mr. May, for a large Azalea indica variegata. Neat plants of Epacris lævigata were shown by Mr. May, Woodford, and Mr. Hayes, Edmonton; Mr. Wright, gardener to Hon. Miss Rushout, Wanstead, had Boronia serrulata; Mr. Bray, gardener to Sir I. L. Goldsmid, St. John's-lodge, Regent's-park, had a very good Tropæolum Jarrattii.

In fostering the BRITISH FERNS, the Society effects good by a twofold channel, for it encourages the study of one of the most interesting groups of Cryptogamic vegetation, at the same time that it incites to the pursuit of British botany. On this occasion two collections of thirty native ferns were produced, and received equal first prizes—that from Mr. Smith, gardener to J. Anderson, Esq., the Holme, Regent's Park, on the ground of variety, and that from Mr. Taylor, of Streatham, for superior growth. Mr. Smith's collection contained Polypodium phegopteris, dryopteris, and calcareum; Allosorus crispus; Woodsia ilvensis, and hyperborea; Lastrea thelypteris, oreopteris, cristata, and rigida; Polystichum lonchitis, aculeatum, and angulare; Cystopteris fragilis, and alpina; Asplenium adiantum-nigrum, lanceolatum, marinum, trichomanes, viride, fontanum, alternifolium ruta-muraria, and septentrionale; Ceterach officinarum; Adiantum capillus veneris; Trichomanes radicans; Hymenophyllum Tunbridgense; Osmunda regalis; and Botrychium Lunarla. Mr. Taylor's, which were larger plants, consisted of Polypodium phegopteris, dryopteris, and calcareum; Allosorus crispus; Lastrea thelypteris, Filix-mas, cristata, spinulosa, and dilatata; Polystichum lonchitis, aculeatum, and angulare; Cystopteris fragilis, and dentata; Athyrium Filix-femina; Asplenium adiantum-nigrum, marinum, trichomanes, viride, fontanum, ruta-muraria, and septentrionale; Scolopendrium vulgare; Blechnum boreale; Adiantum capillus-veneris; Pteris aquilina; Ceterach officinarum; Trichomanes radicans; Hymenophyllum Tunbridgense; and Osmunda regalis.

Of SEEDLINGS, a few remain to be noticed, Seven Azaleas were shown, of which two obtained medals. One of these, named Iveryana. came from Messrs. Ivery and Son, Dorking, and is a white variety, with red stripes, in the way of Gladstanesii, larger, but otherwise less perfect; it was, however, on this occasion shown in good condition, and is a useful and handsome variety. The other came from Mr. Fraser, and was named Alba magna; this had large blossoms, white, with a few purple blotches. A white variety, called Alba spectabile, from Messrs. Lee, and a red one from Messrs. Veitch, called Exoniensis, were promising; violacea elegans, sent by Mr. Green, was of a bright and attractive colour.—Six Heaths from Messrs. Veitch, and one from Messrs. Rollisson, were very handsome varieties, but hardly distinct enough from others of the aristata class, to which they belonged. The most distinct were two of Veitch's. named Devoniana, rich bright scarlet, with pure white limb; and dulciflora, a large flower, pale red, and distinct, from the lightness of its colour, though less rich than the other; both had somewhat the shape of ampullacea, which rendered them still more distinct; these were awarded medals. A certificate was given to Messrs. Henderson for Sindryana, a pretty and free-growing variety, in the way of hiemalis.

For the best collection of twelve new, first-rate, and distinct varieties of Pelargoniums, grown in 8-inch pots:—1st prize to Mr. Cook, of Chiswick, for Beck's Mustee, Hebe's Lip, Queen of Trumps, Forster's Orion, Isabella, Sylvia, Miss Holford, Negress, Forget-me-not, the Pearl, Arabella, and Rosy Circle;—2nd prize to Mr. Parker, gardener to J. H. Oughton, Esq., Roehampton, for Arabella, Titus, Forster's Orion, Camilla, Marc Antony, Mustee, Vesuvius, Pompey, Hebe's Lip, Armada, Rosy Circle, and Bianca;—3rd prize to Mr. Robinson, gardener to J. Simpson, Esq., Pimlico.

To Nurserymen, for the best collection of twelve new, first-rate, and distinct varieties of Pelargoniums, grown in 8-inch pots.—1st prize to Mr. Beck, of Isleworth, for Gulielma, Cruenta, Centurion, Blanche, Cassandra, Gustavus, Rosamond, Cavalier, Grandiflora, Bacchus, Pacha, and Hebe's Lip;—2nd prize, to Mr. Gaines, Battersea, for Sir W. Raleigh, Gilbert, Queen of Beauties, Gazelle, Mrs. Brook, Xanfa, Miss Holford, Angelina, Model, Chieftain, Rose Bud, Cassandra, and Brenhilda. For the best collection of six fancy varieties:—1st prize, to Mr. Gaines, for Lady Rivers, Anais, Ytolinski, Ibraham Pacha, Nosegay, and Jehu.

SEEDLING FLORISTS' FLOWERS. —*Pelargoniums.*—A prize was awarded to Messrs. Veitch and Son, nurserymen, Exeter, for Topping's Brilliant, a seedling that received a first-class certificate in 1847; it is a noble flower, and will rank with the best in its class; the colour is after the style of Duke of Cornwall, but quite distinct from that variety; it is a good trusser, and an excellent habit. Mr. Beck, of Isleworth, was awarded a prize for a last year's variety named Delicatissima, a tolerably good flower in its class, but nothing new or superior, as shown in its present condition; it may improve as the season advances; shape tolerably good, top petals a dark brown, or maroon, bottom petals pink, with a fair proportion of white at the base. A prize to Mr. Ambrose, of Battersea, for a fancy variety named Jenny Lind, which received a certificate last season; this variety has proved itself worthy of a place in any collection; it is a good shaped flower, and superior to many in its class.

ROYAL SOUTH LONDON FLORICULTURAL SHOW,

Was held in the Surrey Zoological Gardens on May 17th. This was the show for the grand display of tulips in the south part of England. The specimens were numerous, and many of first-rate excellence were shown.

In addition to the Large Silver Adelaide Medal offered by the Society, the winner of the 1st prize is to be presented by Mr. Lawrence with 6*l.* worth of Tulips to be selected from his bed. 1st prize was awarded to Mr. Hunt, of High Wycombe, for Polyphemus, Alcon, Matilda, Hamlet, Aglaia, Princess Charlotte's Cenotaph, Darius. Vestris, Thalia, Strong's King, Cerise à belle forme, Violet, and Blandiana.

2nd prize to A. Lane, Esq., West Wycombe, in addition to the prize offered by the Society, Tulips to the value of 5*l.*, by Mr. Willmer, of Sunbury; his flowers were—Vestris, Polyphemus, Aglaia, Roi de Siam, Cleopatra, Violet Noir, Holmes' King, Triumph Royal, George IV., Lavinia, Grandeur, Superbe, and Palafox.

3rd prize to John Edwards Esq., Holloway, who, in addition to the Society's prize, has the power of selecting Tulips to the value of 4*l.* offered by Mr. Lawrence, of Hampton. The stand contained Diana, Baguet, Astonishing, Polyphemus, Cleopatra, Aspatia, Solon, Lalla Rookh, Arlette, Gloria Mundi, Pandora, and Aglaia.

4th prize. Mr. Willmer presents the winner of this prize with Tulips to the value of 3*l.*, in addition to the Society's medal. The prize was awarded to — Bankes, Esq, Cecil-street, Strand, for Washington, Leopold, Triumph Royale, Cleopatra, Lady Elizabeth, Hughes' Rose, Cato, Moi Pitt, Bolivar, Aglaia, Lalla Rookh, and Optimus.

In the *Nurserymen's Class*, the 1st prize was awarded to Mr. Lawrence, of Hampton, for Hufton's Optimus, Roi de Siam, Strong's King, Claudiana, Prince George, Aglaia, Lac, Lord Blomfield, Triumph Royale, Polyphemus, Roscius, and Camuse.

2nd prize to Mr. Batten, of Clapton, whose stand contained Nora Crena, Optimus, Betterel's Brulante Eclatante, Polyphemus, Galatea, Thalia, Platoff, Sarah, Marshal Soult, Astonishing, Pandora, and Rose Brilliante.

3rd prize to Messrs. Norman, of Woolwich, for Lord Strathmore, Dutch Superbe en Noir, Triumph Royale, Platoff, Strong's Rainbow, Catalina, Polyphemus, Goldham's Maria, Gloria Mundi, Belle forme, Violet Noir, and La Riche.

4th prize. An extra prize to Mr. J. Fowle, of Sunbury.

PANSIES.—Great encouragement in valuable prizes were offered to this admired family of flowers, and it induced a strong competition. The stands were very numerous and the flowers well grown.

In the *Amateur's Class*, 24 varieties, the 1st prize was awarded to Mr. W. Hall, of Enfield, who showed Rainbow, Superb, Victory, Optimus, Model of Perfection, Grand Sultan, Companion, Sulphurea elegans, Pliny, Shakspeare, Climax, Pizarro, Arethusa, Reliance, Dazzle, Hamlet, Great Britain, Constellation, Pompey, Curion, Defiance, Perfection, Dido, Supreme.

2nd prize to Mr. T. Over, whose stand contained Rainbow, Sappho, Blooming Girl, Jehu, Superb, Mary Jane, Pizarro, Tryfosa, Isabella, Optimus, Duke of York, Exquisite, Model of Perfection, Goliah, Climax, Shakspeare, Virgil, Baroness Wenman, Excellent, Supreme, Snowdrop, Satirist, Pompey, Duchess of Rutland.

3rd prize to Mr. Rutland, Chipping Norton, for Mary Jane, Rainbow, Princess Royal, Jehu, Blooming Girl, Excellent, Lord Hardinge, Achilles, Model of Perfection, Shakspeare, Black Prince, Superb, Phœbe, Exquisite, Black Bess, Great Britain, Attila, Pizarro, Duchess of Rutland, Bloomsbury, Duke of Wellington, Mulberry, Superb, Optimus, Sulphurea elegans.

4th prize to Mr. Hale, of Hillingdon.

5th prize to J. Edwards, Esq., of Holloway.

6th prize to Mr. Scotcher, of Horton near Colnbrook.

7th prize to Mr. Bridges, of Croydon.

In the *Nurserymen's Class*, in stands containing 36 blooms, the 1st prize was obtained by Mr. C. Turner, of Chalvey, his flowers were:—

Supreme, Duchess of Rutland, Goliah, Constellation, Climax, Rainbow, Zabdi, Arethusa, Achilles, Optimus, Shakspeare, Blooming Girl, Companion, Bride of Abydos, Model of Perfection, Attila, Hamlet, Pongriceus, Mary Jane, King of Holland, Superb, Othello, Aurora, Duke of Norfolk, Almanzor, Perseus, Berryer, Pizarro, Milton, White Perfection, Curion, Prince of Orange, Snowdrop, Plato, Hampden, Zabdi.

2nd prize, Cutter and Co., Slough, for Rainbow, Climax, Mary Jane, Arethusa, Candidate, Dr. Wolff, Duchess of Rutland, Azurea, Goliah, Celeste, Optimus, Zabdi, Superb, Duke of Norfolk, Mrs. Hamilton, Shakspeare, Lord Hardinge, Pizarro, Exquisite, Perfection, Aurora, Lady Lacon, Supreme, Model of Perfection, King of Holland, Wellington, Bellissima, Duchess of Rutland, Baroness Wenman, Attila, Marquis of Lothian, Black Prince, Madonna, Achilles, Snowdrop, and Titian.

3rd prize, Messrs. Bragg and Bright, Slough, for Milton, Rainbow, Blooming Girl, Mary Jane, Great Britain, Byne's Jenny Lind, Constellation, Tryfosa, Duchess of Rutland, Almanzor, Candidate, Bride of Abydos, Aurora, Pizarro, Eclipse, Arethusa, Bloomsbury, Superb, Bragg's Celeste, Mr. Hamilton, Duke of Norfolk, Unit, Countess of Stradbrooke, Eliza, Zabdi, Berryer, Wonderful, Matilda, Supreme, Clara, Bragg's True Briton, Optimus, Charon, and Model of Perfection.

4th prize to Mr. Thomson, Iver.

5th prize to Mr. Agate.

6th prize to Messrs. Hart and Nicklin, of Guildford.

Prizes were presented by the Pansy Improvement Society to private growers, who had never taken a prize, for stands containing 12 blooms.

1st prize, Mr. Hale, jun.; 2nd. C. Matthews, Esq.; 3rd. Mr. H. Harms. Also for the best bloom of a white ground Heartsease, awarded to Messrs. Cutter and Co., Slough, for Bell's Climax; for the best yellow ground, to Mr. Turner, of Chalvey, for Youell's Supreme.

SEEDLINGS.—*Pelargoniums.* Small Silver Linnean Medal, presented by subscription to Mr. Beck, of Isleworth, for a seedling named Aurora's Beam, a large richly coloured flower, under petals deep rose with a spot on each, very dark top petals with a narrow margin of rose. The same to Mr. E. Beck for a white variety named Mont Blanc No. 1, a large pure white flower, with a small spot of a purple rose colour in the top petals; the flower is of a good shape and smooth on the edges. *Calceolarias:* A certificate to Mr. Gaines for a Calceolarea, named Earl St. Germain, yellow ground richly spotted with brown; a flower of good form. *Azalea:* To Mr. Ivery, of Croydon, for a variety, named Iveryana, a large clear white flower, occasionally striped with rose. To Mr. Ambrose, of Battersea, for a fancy Pelargonium, named Garland.

HORTICULTURAL SOCIETY.

The first exhibition of plants, &c., for the present season was held on Saturday, May 19th, in the gardens of the Society at Chiswick; and, for the period held, we never previously saw an equal assemblage of superb vegetable productions. They were, as a whole, splendid in the extreme for health, beauty, and selection. We feel truly sorry, at this late period of the month, not to be able to give more extended particulars in our June number; we are obliged to be satisfied with (for the present number) the insertion of a selection of the most popular tribes.

AZALEAS.—This exhibition is usually brilliant with the charming tribe of Indian Azaleas, and the present species and varieties brought together afforded us the opportunity of making a descriptive list of all the best presented on this occasion.

Mr. Green, gardener to Sir E. Antrobus, Bart., exhibited the following in splendid specimens:—

A. triumphans.—A pretty rosy blush, with dark crimson spots and blotch on the upper part. It is a first-rate variety. Flowers large, and the plant four feet by four.

A. variegati.—White-ground, suffused and streaked with a reddish flesh colour, also some reddish dots on the upper portion. It is very distinct and neat. It deserves to be in every collection, forming a pretty contrast with the higher colours. The plant was six feet high and four across; a mass of bloom.

A. rubra plena.—The flowers of a light orange-red, double. We have seen many plants of this variety in bloom, but not any one of so double a character, or so well bloomed as the plant here shown. It was nine feet high and four and a half across: a mass of bloom. Its curiosity gives it a claim to any collection.

A. Gledstannii.—White, the centre having a tinge of green, and the flower has occasional streaks and spots of rosy-scarlet. A separate blossom from two and a half to three inches across. The plant was five feet high by four across, and was literally covered with flowers. It is a beautiful kind, and ought to be in every collection.

A. laterita.—The flowers are of a neat round shape, and of a handsome orange-red colour. A separate flower is two inches and a half across. The plant was six feet high and four across, most profusely in bloom. It is a pretty, neat variety.

A. speciosa.—A rich rose with crimson blotch and spots; very showy, flowers large. The plant was seven feet by five.

A. exquisiti.—A pale pink with white margin and rich rose-coloured blotch and spots. It is a first-rate variety, and deserves to be in every collection. Plant five feet by four.

A. rosea elegans.— A pretty rosy-pink with rosy-crimson blotch and spots. Flowers large and very showy. Plant six feet by three. It is a very handsome variety, deserving to be in any collection.

A. vivicans.—A bright rose with very slight spotting. The plant four feet by three.

A. sinensis.—A rich yellow, with the upper portion darker. Very pretty. Plant five feet by three.

A. præcentissima.—A light red, of a second-rate variety. Plant five feet by three.

A. pallida.—A pretty lilac, flowers large. Plant six feet by three.

Mr. Donald, gardener to Mrs. Lawrence, of Ealing Park, showed the following:—

Azalea macrantha purpurea..—The flowers were of a bright velvet purple, with the upper part of the flower dotted with large spots of a deeper colour, giving a very distinct contrast. A separate blossom was five inches across. It is a first-rate variety, worthy to be in every collection. The plant was four feet high and three across.

A. Rawsoni—The flower large, of a bright violet-purple. It is a second-rate variety. Plant four feet by three.

A. Lawrenciana.—A rich deep scarlet, with a blotch, and dotting of a dark crimson. It is a first-rate variety. Flowers large; plant four feet by three.

A leucomgesta.— White, with a blotch and dotting of a pretty green. Flowers a good size. It is a first-rate kind, and ought to be in every collection.

A. Minerva.—Flowers orange-scarlet, without any spots or blotch. A second-rate variety.

A. (seedling).—A purple-violet; large size.

A. Grenvillia.—Bright red, with darker blotch and spots. Second-rate flower.

Along with A. Gledstannii, laterita-variegata, rubra plena, and triumphans.

Mr. Fraser, of Lea-bridge, showed the following:—

A. optima.—Bright rosy-scarlet; flower large and showy. The plant six feet by four.

A. purpurea superba.—A bright purple, with darker blotch and spots. The plant was five feet by four. It is a very distinct and fine variety.

A. indica alba.—This old white kind is always admired. The plant was seven feet by six.

A. phœnicea.—A pale red; showy. The plant five feet by five.

A. triumphans, five feet by four. A. Minerva, three feet by three. A. speciosissima; very showy, six feet by four. A. laterita, four feet by four. A. variegata, six feet by four. A. exquisite, five feet by five.

Messrs. Lane, of Berkhamsted, showed the following:—

A. grandis.—Violet, with lilac blotch and spots. A very fine kind, well deserving a place in a collection.

A. refulgens.—A showy orange-red; very pretty.

A. robusta.—A bright rosy-red; showy, and large flowers.

A. decora.—Rosy-red, with deeper blotch and spots; very fine, and showy.

A. punctatum.—A pale red, with a very distinct deeper blotch and spots.

A. semiduplex coccinea.—Rosy-scarlet; very showy and handsome; well worth growing.

A. Wooderii.—Violet, with crimson blotch and spots. Very pretty, and well worth growing.

A. picturata; A. laterita plena; A. prestantissima; A. leucomgesta; and A. rosea-elegans.

Mr. Fleming showed:—

A. speciosa-pallida. A semi-double pinky-lilac; pretty.

A. fulgens.—A rich deep scarlet; no blotch or spots, but very showy.

A. splendens.—A light flesh-colour, with a tinge of red and violet; very pretty.

A. speciosa laterita.—A large light red flower; very showy.

The following Azaleas were shown as single specimens:—

A. refulgens.—Bright scarlet, with darker blotch and spots. Flower large, and plant four feet by four. It deserves to be in any collection.

A. coronata.—A vivid rose, with a violet tinge, slightly spotted. Very showy, and worth growing.

A. exquisite.—Pale pinky flesh, with white margin, and deep rose blotch and spots. It ought to be in every collection.

A. speciosissima.—A bright rosy red, slightly spotted. A separate blossom, is five inches across. It is very showy,

A. incomparabilis.—A rosy-pink. Flower large and showy. Second-rate.

A. spectabile.—A pretty purple, but only a second-rate flower.

A. glory of Surrey.—A light red, double, with slight spots. Flower large, but not neat formed.

A. conqueror.—A light orange-scarlet flower, large and showy, but not first-rate form.

A. laterita formosa.—A rich rosy-crimson, darker spots, with a tinge of violet, and large flower. It is a handsome variety.

A. laterita pulchra. A bright crimson purple; flower very large and showy. It merits a place in any collection.

A. coccinea-superba.—A very bright scarlet, with dark blotch and spots. The flower is large and showy. It deserves a place in any collection.

A. pulcherrimina.—A lilac-purple, with reddish spots. A very distinct variety, and well deserving to be one of a collection.

A. aurantea superba.—A pale orange-red, with rose spots and a violet tinge.

A candidissima. A pure white; flower four inches across. Handsome.

New and Rare Plants exhibited.

Mitraria coccinea. (Messrs. Veitchs')—The plant is a neat erect shrub, with leaves in size and form like Achimenes longiflora. The flowers are each about two inches long, tube-formed, bellying much; they are borne on long footstalks, and hang pendant. The colour is a rich orange scarlet. It is a very beautiful and interesting plant.

Viola lutea. (Messrs. Veitchs')—This is a very neat and beautiful species. The flowers rise about six to eight inches high, and a separate blossom is about an inch across of a bright rich yellow colour.

Gloxinia insignis. (Messrs. Rodderbay, of Clifton, near Bristol.)—The flower is about four inches long, of a bright rose, and the inside of it having a broad deep crimson mark along the bottom. It is a showy variety.

Salvia, a new species. (Messrs. Veitchs'.)—The foliage is small, and the flowers are a deep blue colour, each blossom is about an inch long. It is not equal to many others of the tribe.

Sephocampylus pubescens.—Of medium growth. The flowers are of a violet purple colour, and a separate blossom two inches and a half long, Æschynanthus Javanicus. (Mr. Jack, gardener to G. Loraine, Esq.)—Each flower is about two inches and a half long. The calyx is an inch long, of a dark chocolate colour. The tube-shaped flower is of a bright scarlet. The flowers are produced in fascicles of several together.

Hypocalymina robustum.—The flowers are borne in long spikes, like some of the old spireas, of a pretty lilac pink colour. It is a neat shrubby plant, (Mr. Jack.)

Napoleana imperialis. (Mr. Iveson, of Sion House Gardens.)—The flower has somewhat the appearance of a small disarranged flower of a Passiflora, of a dull buff colour, with portions of red. The flowers are borne under cover of the noble foliage, which nearly conceal them. They are not of much interest.

Azalea Iveryana. (Messrs. Ivery, of Croydon in Surrey).—The flower is large, a pure white with pink streaks and spots. It is a very handsome variety, worthy a place in any collection. It is an hybrid raised by them.

Petunia (Hybrid).—(Mr. Ingram, gardener to Her Majesty the Queen at Windsor)—The flower appears rough, but of a leathery thickness. It is funnel shaped, five inches long, and five inches across the mouth. The outside is of a rosy-purple intermixed with batches of white. The inside of the tube is of a deep violet. It is a noble variety, far exceeding in size any other we have seen or heard of.

Fine Specimen Plants exhibited.

Francisea Hydrangeaformis. (Mr. Green, gardener to Sir E. Antrobus).—A large plant, was in fine bloom, having Hydrangea-formed heads of flowers, about six inches across. The blossoms were too much crowded, but their pretty blue and purple colours give a nice effect; but the contrast of such large leaves to the head of flowers is so disproportionate as not to give the effect desirable.

Pimelea Hendersonii (Mr. Cole).—A fine plant, literally covered with flowers. They are of a bright rosy-carmine. It is the handsomest of the tribe we have seen, and deserves a place in every greenhouse.

Gloxinia Teuchlerii.—Rose with streaks of blue, and a deep red inside.

Dipladenia nobile.—An erect shrub; the flowers in a spike: they are of a bright flesh colour, with a purple inside of the tube. It is neat and handsome. (Mr. Mc Intosh, gardener to J. Wyndham, Esq., of Salisbury.)

Gompholobium splendens. The large pea-formed flowers, of a bright yellow colour, produce a beautiful appearance. It deserves a place in every greenhouse.

Stephanotus floribundus.—A plant coiled round a wire trellis with thirty-five heads of its lovely waxy white flowers. This plant deserves general cultivation.

Sobralia macrantha.—A magnificent flowering orchideous plant. The flowers are nine inches by eight; a bright violet, lilac, white, and yellow are in combination to grace this very splendid flower.

FANCY PELARGONIUMS.—Mr. Gaines exhibited the following:—

Ibrahim Pacha.—Upper petals bright rosy-crimson, with a violet tinge towards the centre of the flower, and a light margin; lower petals a light ground, and in the middle of each petal a blotch of light crimson. Flower an inch and a half across. It is showy, but not a good shape.

Ytolinski.—Upper petals a dark velvet, with a light margin; lower ones a light ground, with a broad band of rosy-pink across the middle, and the margin light. The flower is an inch and a half across; good form.

Queen Victoria.—Ground colour white, with a slight tinge of flesh colour, and a spot of rose in the middle of the upper petals. It is inferior-shaped.

Yeatmanniana grandiflora.—Upper petals dark crimson, shading off to a light margin; lower petals light ground, and a bright rose spot in the middle of each. Form, second-rate.

La belle de Afrique.—Upper petals, nearly the entire is dark, shading off with crimson and a light margin; lower petals light colour the centre half, then dark crimson band and a light margin. Each flower is about two and a half inches across. Second-rate form.

Anäis.—The flower has a light ground, giving to it a large whitish centre, having lines of rosy-violet. Next to this is a broad band of violet and crimson with a white margin. Flower, good form and very handsome.

Mr. Ambrose showed the following:—

Nosegay.—Flower, light ground with a large blotch of velvet. The lower streaked with red. The form inferior.

Lady Rivers. Flower a light ground, and the upper petals have a broad band of rich rosy-violet across the middle, and then a light margin. Lower petals have a slight tinge of lilac on the centre of each. Good form.

Lady Flora Hastings.—Upper petals velvet, dark, and rosy-violet, with a light margin; lower, white with a tinge of lilac. Flower two and a half inches across. Good form.

Queen Victoria (Sheppard's).—White ground, with a rich rosy-violet spot in the centre of each.

With Anais and Ibrahim Pacha.

Single Specimens of Fancy Pelargoniums.

Ovid.—Crimson, with a light centre and a whitish margin. Second-rate form.

Harlequin (Beck's).—Ground colour white, with a tinge of rose. The upper petals are of a dark crimson. The form is very bad. The upper petals appear as if the margin of each had been clipped into five irregular sized sharp-pointed angles: each point has a small tip of white.

Countess of St. Germain.—Ground colour a pretty blush; the upper petals have a large blotch of rosy-violet, with a light margin.

Victorine.—Upper petals towards centre of flower; it is lilac, banded with bright pink, and a light margin. Lower petals white, with a tinge of lilac, and a spot of rose colour in the middle of each. The margin is somewhat wavy.

Ne plus ultra,—Centre white, broadly banded round with bright rose, and a white margin. The face of the flower appears very wavy, but it is a very showy variety.

Garland (Ambrose's).—Centre of the flower white, with tinge of lilac and slight streaks of rose; this is broadly banded round with bright rosy-violet, and the margin is light. The flower is of fine shape, and an inch and a-half across. This was the prize flower of the Royal South London show.

Harlequin (Ambrose's).—Upper 'petals very dark, with a narrow light margin. The lower petals have a light ground, with a blotch of crimson in the middle. It is an inferior form, and, like Beck's Harlequin, a ragged appearance.

Picta.—Upper petals bright rosy-crimson, with a white margin. The lower petals have a bright rosy-crimson spot in the middle of each, which is surrounded with lilac, and the margin white. A fine-formed flower, and an inch and a-half across.

Queen superba.—Upper petals a bright rosy-pink, with a broad light margin. Lower petals blush-lilac.

Fairy Queen.—Upper petals, towards centre of flower, a violet tinge, then rich crimson; and a pure white margin. Lower petals a light ground with a rosy-violet spot in the middle of each, with slight streaks of the same radiating from it. A fine form, and an inch and a half across.

Bouquet tout fait.—Upper petals have a large velvet blotch, with a light margin. Lower petals a light ground, with a spot of bright rose in the middle of each. Good form, and an inch and a half across.

Imperatrice Josephine.—A light ground, with a spot of rose in the middle of each petal.

Jehu superb.—Upper petals dark velvet crimson, with a white margin. Lower petals a white ground, with a band across the middle, of bright rosy crimson, from which there are streaks of the same. The margin is white. Good form. An inch and a-half across.

Champion of Devon.—Upper petals velvet and crimson, with a violet margin. Lower petals light towards centre of flower, banded with crimson, and a light, broad, purple margin. Very pretty. An inch and a-half across.

Bouquet de Flora.—A light ground, the upper petals a rosy crimson blotch. Lower petals a spot of purple at the middle of each.

To Amateurs, for the best collection of twelve distinct Pelargoniums, grown in eight-inch pots:—

1st prize to Mr. Cock, of Chiswick, for Zenobia, Paragon, Negress, the Pearl, Lyne's Forget-me-not, Forster's Orion, Miss Holford, Armada, Rosy Circle, Hector, Minerva, and Sylvia.

2nd prize to Mr. Staines, Middlesex Place, for Duke of Wellington, Bianca, Arabella, Vesuvius, Pompey, Forster's Orion, Duchess of Leinster, Camilla, Chimborazo, Beck's Mustee, Rosy Circle, and Lyne's Forget-me-not.

3rd prize to Mr. Robinson, gardener to J. Simpson, Esq., Pimlico, for Sylph, Madeline, Juliet, Duke of Cornwall, Desdemona, Forster's Orion, Sarah, Beck's Aurora, the Pearl, Eliza Savage, Matilda, and Rosy Circle.

To Nurserymen, for the best collection of twelve distinct varieties of Pelargoniums, grown in eight-inch pots:—

1st prize to Mr. Beck, of Isleworth, for Beck's Gulielma, Honora, Caroline, Rosamond, Cracker, Blanche, Cassandra, Princess, Hebe's Lip, Centurion, Aurora, and Gustavus.

2nd prize to Mr. Gaines, of Battersea, for Lady Kelly, Chieftain, Angelina, Cassandra, Model, Miss Holford, Queen of Beauties, Marc Antony, Princess Alga, Iago, Floribunda, and Voyager.

To Amateurs for the best collection of six distinct varieties of Pelargoniums, grown in eleven-inch pots:—

1st prize to Mr. Parker, gardener to J. Oughton, Esq., Roehampton, for Bainbridge's Camilla, Rosy Circle, Forster's Orion, Pamplin's Sir Walter Scott, Superba, and Beck's Isabella.

2nd prize to Mr. Staines for Vesuvius, Emma, Erectum, Sylph, Sir Robert Peel, and Rosy Circle.

To Amateurs, for the best collection of twelve distinct varieties of Roses, grown in pots:—

1st prize to Mr. Slowe, gardener to W. R. Baker, Esq., for Hymena, Bouquet de Flora, Nina, Goubault, Madam Laffay, Emile Constia, Mrs. Bosanquet, Pactolis, Bourbon, Triumphant, Archduke Charles, and Belle Emile.

2nd prize to Thomas Dawson, Esq., Panshanger, Herts, for Baron Prevost, Augustine Marget, Cramoisie Superieure, Henri Bashet, La Reine, Rivers' Hybrid Perpetual, Chenedole, Madam Laffay, General Allard, Aubernon, Louis Buonaparte, and Richelieu Duval.

To Nurserymen, for the best collection of twelve distinct varieties of Roses, grown in pots:—

1st prize to Mr. Francis Hertford for William Jesse, Eugene Hardy, Bougere Belle Maria, Charles Duval, Mrs. Elliott, Devoniensis, Souvenir de la Malmaison, La Reine, Armosa, Mrs. Bosanquet, and Mr. Lane.

2nd prize to Messrs. Lane and Son, Great Berkhampstead, for Amie Vibert, Queen Armosa, Madam Bureau, Banksian Yellow, Psyche, Souvenir de la Malmaison, Comte de Paris, Baron Prevost, Vicomtesse de Cazes, Persian Yellow, and Marquise Bocella.

Messrs. Beck and Paul's collections were considered equal, consequently both had 3rd prizes. In Mr. Beck's collection were Bougere, La Reine, Louis Buonaparte, Proserpine, Persian Yellow, Stadtholder, Augustine Marget, Le Grenadier, Souvenir de la Malmaison, William Jesse, General Vallais, and Triumphant. In Messrs. Paul's collection were Clementine Seringe, Souvenir d'Anselme, La Reine, Antinous, Coup d'Hebe, Harrisonii, Belle Marie, Madame Aude, Mrs. Elliott, Julia Mansais, Melonie, Connu, and De Candolle.

For the best collection of six distinct varieties of Yellow Roses, grown in pots:—

1st prize to Mr. Francis, Hertford, for Eliza Savage, Cloth of Gold, Pauline Plantier, Harrisonii, Smith's Yellow Noisette, and Solfaterre.

(*Continued next month.*)

FLORAL OPERATIONS FOR THE MONTH.

IN THE FLOWER GARDEN.

THE fine weather of May would allow for the planting out in beds, &c., half-hardy as well as the tender annuals, Heliotropes, Pelargoniums, Verbenas, Petunias, Celsias, Zinnias, Stocks, &c., but any omissions should be attended to at once.

We have frequently called the attention of our young readers to the desirability of paying strict attention to the judicious arrangements of flowering plants, as regards height and harmony of colouring. It is true that, of late years, this subject has become a matter of study amongst gardeners, and great changes for the better have taken place in this respect; still we are far from supposing that we have arrived at perfection. Always bear in mind—if beauty, order, and effect are desired—that attention to this, next to a well laid-out flower garden, is essential to their full developement. In producing well-arranged contrasts, the different shades of colour must be as distinct from each other as possible; for instance, white should never be placed in contact with yellow, or deep blue with crimson; but white forms a good contrast with blue or red, blue to orange, yellow to purple or violet, dark crimson to light blue, and scarlet should be placed near those which have a profuse green foliage, as red and green form the best contrast. Orange and violet do well. Greenish-yellow and rose contrast well.

The only attention now required with such is to water freely, being careful it does not pass off, tie up, &c. Pinks and Carnations will require due care in securing, and by the middle of the month pipings of Pinks may be taken off, and towards the end layers of some early Carnations be made. Thin away extra flower buds. Dahlias will require securing, and thin out the shoots, so as only to retain about four or five. Stop the leading stem, to give support to the side ones. Cuttings will soon strike root. If the weather be dry, water duly, a good supply at once: a portion of mulchy manure, spread over the roots, is very beneficial. Seeds of Sweet Williams, Canterbury Bells, Scabious, &c., should now be sown for next year's blooming. Auricula and Polyanthus must be kept in a shady, but airy place. Prepare the compost for re-potting in next month. Sow seed as early as ripe. Pansey seed also sow. (See Articles on, &c.)

NEW FLOWERS.—Let attention be given to hybridizing, with a view to obtain improved varieties. Roses—maggots often infest the buds; carefully examine and destroy. Green fly, too, stop at first by fumigation, &c. (See Articles on.) Chrysanthemums: young plants should be prepared for the autumn. Violets for next year's blooming, attend to beds of, &c. (See Articles upon.)

IN THE GREENHOUSE, STOVE, &c.

The greenhouse plants which are placed out of doors will require to be duly watered, for if allowed to flag the result is the leaves are damaged. Moss sprinkled between the pots keep the soil cool.

The house will now have to be kept gay and sweet by Balsams, Globe Amaranthus, Coxcomb, Brachycoma, Mignonette trees, &c. Re-pot as required, in order to keep the plants in a growing state. Achimenes brought forward in the stove will now be coming into bloom; they repay for every attention. Cuttings of nearly all greenhouse plants should now be put off: May and June are the best months for that purpose. Cinerarias are highly ornamental, and well worth encouraging. Cuttings of Roses may be put in, and will soon strike. Camellias that have been forwarded by forcing the shoots and buds should now be placed in a cooler situation, to give vigour to them. When the grass of Ranunculus or Tulips is quite dead, the roots may be taken up. Pelargoniums, as they go out of bloom, must be prepared for another season. (See Articles on, &c.)

Ericas.—The early blooming kinds should be draughted out, and others may follow them as fast as they go out of bloom. Examine the plants very carefully, and see that they are in a proper state as to moisture; and if you are an exhibitor, never put a plant of this or any other kind into a van without previously giving it a good soaking of water. The young plants which are not blooming had best be placed in a pit where they can be exposed or not, as may appear necessary. Stop such as require it boldly back, and train them so as to form a proper foundation for a good specimen. As the principal specimens go out of bloom they may be removed to a shaded situation to make their growth, being previously cut in if necessary. Supports for an awning must be placed over them, so that in case of heavy storms, or continued rain, they can be protected a little. Clear, weak manure water may be used occasionally for the free growing kinds. With regard to ventilation there is no fear of your over-doing it after this time. Re-pot any requiring it, but do not over-pot; the one-shift system is injurious to nearly all the tribe, the only exceptions are those of rapid growth and robust habit. Rough peat and silver sand, with bits of stone, &c., and a liberal drainage, are requisites. Epacrises, &c., should also be duly attended to in re-potting, &c.

Azaleas in the forcing pit must be kept shaded during bright sunshine, and a moist growing atmosphere must be maintained around them. Water freely with weak guano water, and sprinkle the vacant parts of the house or pit daily, but not upon the bloom. As the plants go out of flower place them in heat, to perfect their wood for next year's blooming. (See Articles on in previous volumes.)

BULBS AND SEEDS FROM INDIA.

BY FLORA.

Both have been sent from India to this country encrusted in white wax, and afterwards wrapped in cotton, and although they had been four months so encrusted, they arrived in a perfect state, and all grew vigorously.

Y, 1848.

TRATIONS.

BILIS—SHOWY FUCHSIA.

vered by Mr. Lobb, growing at an
usand feet in the Andes of Cuenca, and
srs. Veitch's of Exeter, with whom the
recently exhibited at the Horticul-
t-street. Mr. Lobb describes it as the
t he found it growing in shady woods
is a fine looking shrub, woody below,
ulent, of a rich blood-red colour. The
, and a deep purple underneath; these
attractive. It appears to be a free
d ought to be in every collection of
owers. Dr. Lindley describes this new
." It is not yet offered for sale.

W OR RARE PLANTS.

LOSUS—GLANDULAR-LEAVED.

Hexandria Digynia.

Land, introduced by Ronald Gunn, Esq.,
t Kew. It is a pretty evergreen shrub,
flowers are produced in spikes, each
ross, of a delicate fleshy pink, and show
leaves. It has been treated as a green-
h of England it would probably do out
Mag., 4377.)

CORYNOCARPUS LÆVIGATA—SMOOTH-LEAVED.

Myrsinaceæ. Pentandria Monogynia.

A native of New Zealand. It forms a pretty tree, the leaves being of a dark glossy green; the flowers are uninteresting. (Figured in *Bot. Mag.*, 4379.)

DENDROBIUM ANOSMUM—SCENTLESS.

Orchidaceæ. Gynandria Monandria.

Messrs. Loddiges obtained this fine plant from the Philippine Islands. It has recently bloomed in their noble collection. The stems are vigorous, pendulous, bearing numerous flowers. Sepals and petals of a lilac purple. Labellum with a white margin, and the interior of it a velvet black, with a violet tinge at the lower part of it. A separate flower is nearly three inches across. (Figured in *Pax. Mag. Bot.*)

ERIOSTEMON NERIIFOLIUM—OLEANDER-LEAVED ERIOSTEMON.

Rutaceæ Boronieæ.

A very fine shrubby plant, well adapted for exhibition purposes. It forms a close branching shrub, from three to four feet high, with lanceolate pointed leaves, the flowers growing from their axils; the leaves are about the size of those of a broad-leaved Myrtle, but rather longer; the flowers are star-shaped, formed of five spreading petals, the colour of which is blush-white, tinged and tipped with pink; they are borne profusely all over the plants in April and May. It is a native of New Holland, and was introduced before 1847, being probably confounded with E. cuspidatum.

GESNERIA LIBANENSIS—MANY-FLOWERED. (Syn. Rytidophyllum floribundum, Conradia floribunda.)

Gesneriaceæ. Didynamia Angiospermia.

Supposed to be from the West Indies. The plant is quite dwarf, growing but a few inches high. It blooms freely; a plant about three inches high and five or six across will produce twenty flowers. They are of a rich scarlet, and a single blossom is about an inch and a half long, tube-shaped, with the end decurved. It requires the usual stove treatment given to the tribe. It has bloomed at the Royal Gardens of Kew.

JATROPHA PODAGRICA—GOUTY STALKED.

Euphorbiaceæ. Monœcia Monadelphia.

From New Grenada. The plant grows about half a yard high, and only a few leaves appear at a time. The flowers are produced in a cyme of about four inches across, of a rich orange-red colour, and in contrast with the bright yellow anthers have a pretty appearance. It requires to be grown in the hothouse. (Figured in *Bot. Mag.*, 4376.)

IXORA JAVANICA—JAVANESE IXORA.

Cinchonaceæ.

A beautiful evergreen shrub, growing from three to four feet high, with opposite ovate oblong-pointed leaves, and terminal dense trichotomous corymbs of rich orange-vermillion coloured flowers. The flowers in this genus are salver-shaped, that is, having a slender tube and a spreading limb; this limb, in the present species, consists of four oval roundish lobes. The plant is similar to Ixora crocata, but different and somewhat superior to it in its flowers, which are produced in the summer. Native of Java, in the woods on the mountain sides, whence it was introduced in 1846 by Messrs. Veitch. It is the Pavetta javanica (Blume).

PENTSTEMON LANCEOLATUS—LANCEOLATE-LEAVED PENTSTEMON.

Scrophulariaceæ.

A showy perennial, clothed with short viscous pubescence, and growing about three feet high. The leaves are lance-shaped, of thickish texture. The flowers form a rather loose few-flowered leafy panicle at the top of the stem; they are large, and grow singly or sometimes three together, being short and swollen, and expanding into a five-lobed limb; the colour is deep purplish-lilac, and they open towards the end of the summer. An ornamental species, introduced from Mexico, near Aguas Calientes, to Belgium, about 1844. It is nearly hardy, requiring shelter in wet or severe winter.

THIBAUDIA MICROPHYLLA—SMALL-LEAVED THIBAUDIA.

Vacciniaceæ.

A neat evergreen shrub, with smooth-furrowed branches, and small leathery dark green roundish-oblong retuse leaves, somewhat resembling those of the box-tree; they are nearly sessile, with a few scattered minute hairs on the under surface. The flowers are produced singly in the axils of the upper leaves, and stand nearly erect, projecting quite clear from the leaves; they are tubular cone-shaped, with a small five-cleft orifice at the apex, and are said to be of a scarlet colour; in dried specimens they appear purple. It is a native of Peru (stated to be at an elevation of 12,000 feet), and was introduced in 1847, but has not yet flowered in this country.

THYRSACANTHUS STRICTUS—UPRIGHT THYRSE-FLOWER. (Syn. Justicia longiracemosa, Aphelandra longiscapa.)

Acanthaceæ. Diandria Mongynia.

It is a half-shrubby plant, growing from two to three feet high, branchy. The flowers are borne in erect racemes of a foot in length, of a rich scarlet colour, with a purplish calyx. A single flower is tubular, approaching to funnel-shaped, an inch and a half long. It blooms in the winter months, and is then a highly ornamental plant, deserving to be in every warm greenhouse or plant stove. (Figured in *Bot. Mag.*, 4378.)

ROSA ANEMONÆFLORA—ANEMONE-FLOWERED ROSE.

Rosaceæ.

This species has smooth-branching stems, and trifoliolate leaves, the leaflets of which are almost lance-shaped and sharply serrated; the flowers grow in somewhat globular clusters; they are not individually very large, nor remarkable in colour, being pale blush; but the five outer petals are broad, while the centre is filled by a quantity of smaller petals, in the same way as the blossoms of a double anemone; they appear in June and July. It is related to the musk Roses, a native of China, and introduced by Mr. Fortune, in 1845.

VACCINIUM LEUCOSTOMUM—WHITE-LIPPED VACCINIUM.

Vacciniaceæ.

A pretty evergreen shrub, with erect angular branches, thick, oblong, nearly sessile leaves, and numerous flowers; in short, three or four-flowered erect racemes, clustered in the axils of the leaves; these blossoms are pitcher-shaped, and are described by Mr. Lobb, the discoverer of the plant, as being "scarlet, tipped with white;" as they crowd every part of the branches, and stand erect so as to become displayed to the best advantage, they must be very ornamental. It is a native of Peru, at Veto, 8000 feet above the sea, and was introduced in 1847 by Messrs. Veitch, but has not yet bloomed in this country.

A FEW WORDS ON TULIPS AND TULIP GROWERS.

BY DAHL, OF MANCHESTER.

LATELY on reperusing some of your former volumes, I came upon a little controversy between Mr. Tyso, Mr. W. Harrison, and Mr. John Slater, to the effect that the north country growers of Tulips was a century behind the south country growers. I recollect that at the time these papers came out I took all for granted, and finding with all the care I took that I got some stained bottoms in my own bed, I thought it more than probable that many growers in the north were in the same predicament; consequently having no knowledge of the north growers at that time, I did not think much of the accusations made against them. Shortly afterwards your esteemed correspondent, Mr. W. Harrison, requested the growers of the different localities to forward to you descriptions of the flowers grown; this request produced the descriptive catalogue of Mr. John Slater of this town, which was severely animadverted upon by a writer in the *Gardener*, and led to a continued discussion, in which you, Mr. Editor, are aware that I took a part. This descriptive catalogue of Mr. Slater's did him much credit, and was extensively circulated. About three years since I came to reside at Manchester, and in a short time I paid him a visit and found him a very respectable man, and much respected in the neighbourhood, an extensive cultivator of Tulips, and a person whose judgment might be relied upon. I have been a sort of Paul Pry, and have peeped in here and there, without any thought of intrusion. And from what I have seen and heard, whatever prejudices I might have had from reading the different papers on the subject, they are now entirely evaporated. I certainly have not found any nurseries for extent like the celebrated one, described by Mr. Glenny some years since, "where they grew Pansies by the acre and Tulips by the mile;" but still there are some extensive growers, and have been for years. It appears that the late Roger Farrand, Esq., of Plymouth Grove, near this city, was an extensive cultivator; and Mr. Butler, who in 1829 published a descriptive catalogue (which is now lying before me), did a great deal towards extending the fancy. The principal varieties of the south are grown here, and a great many that are not known there. The attention that has been paid to the raising of seedlings is very gratifying; this has been carried to such extent that there is every season new things coming out. This season Mr. Slater has been disposing of his collection in order to devote more attention to his own seedlings; I believe he has forty or fifty entire new things, and some of them gems of the first water, and several other cultivators have been doing the same. The attention paid to their breeders is very praiseworthy; they must be entirely clean at the bottom, good cups, and good form, and if the southern growers do not take great care, the northern will soon outdo them. It is true that in many villages for miles round Manchester there are a great many poor men who are weavers, that are tulip growers, and have their exhibitions in their localities, who cannot afford to give 15*l*. for a Pandara, or 10*l*. for a Devonshire, or 5*l*. for a Strong's King, who are now and then forced to put up a creamy or stained bottom; but so great is the competition and the anxiety for clean flowers, that the stained bottoms will soon be done away. One thing is evident here, and that is, there is more attention paid to the regular marking of a flower than in the south. At a Tulip sale I attended the other day, I was surprised at the price that breeders sold at, not at the rate of 8*l*. or 10*l*. the hundred, but 10*s*., 15*s*., and 20*s*. the single root; thus from all that I have seen and heard, I consider that the Tulip growers of the north are at least on a par with the growers of the south.

P.S.—Above I have mentioned the descriptive catalogue of the late Mr. Butler; the only fault I find with him is, that in his descriptions he says nothing about clean or stained bottoms.

I would here suggest, and I hope it will be taken in good part by those growers who send out printed lists of their bulbs for sale, that they insert p. b. for pure bottoms, and s. b. for stained bottoms; it would add much to the convenience and guidance of all purchasers of this most splendid of florist's flowers.

ON STRIKING CUTTINGS OF THE MONTHLY BLOOMING CHINA ROSES.

BY DAHL, OF MANCHESTER.

MAKING a call on a friend a few months since, who had standing in her parlour window some Monthly China Roses, and plants of the Fuchsia that were rather overgrown, she requested me to trim them in a little, which I did, and was collecting what was cut off to throw away; she said, "Perhaps you will take them home and strike them;" I replied, "The Roses are too much trouble, but not having the variety of the Fuchsia, I will take them." She immediately said, "The Roses are no sort of trouble, I struck all these in water in a glass bottle last year."

Hearing this I took part of them home, and the first thing I met with was a doll's China sugar bason, belonging to one of my little girls. I put into it about half an inch deep of earth, and filled it up with water, put in the cuttings, and placed it in an attic window, used as a lumber room. About a month since I went into the room, all the cuttings looked well, and had made wood. On taking them out of the water, the Fuchsias had made splendid roots, and each of the Roses had made three or four roots about an inch long, I planted them in pots and they are doing well.

I have for some seasons struck a quantity of cuttings of different things by the following easy method:—Take a pot of any size, large or small, then a smaller one, stop up the hole of the small one with a cork, and make it water tight; place drainage in the larger one, and put the small one on it, and fill up the space around the small one inside the large one, with some light soil mixed with a little sand. So that there may be about two inches of soil all round the pot; this may be filled with cuttings, and a good sized pot will hold a great many; then fill the smaller one with water, and keep it so. The porous nature of the pot will keep the earth continually in a state of moisture, and in about ten or fourteen days, if the pot is kept in a warm window, the whole will be well rooted and fit to plant out either in pots or beds.

These, Mr. Editor, are such easy and certain methods of propagating plants, that the poorest person and the humble cottager may luxuriate to their hearts' delight, in their Fuchsias, Roses, Verbenas, &c. This last method I have adopted some years, and have always found it more than answer the expectation I at first formed of it.

This plan is referred to by one of your correspondents in a former volume; but before I saw his remarks the plan was suggested to my mind by seeing a mimulus strike in the basin of a fountain, in which was deposited a quantity of earth, and at once I adopted it.

REMARKS ON THE BELLIS PERENNIS, OR DOUBLE-FLOWERED DAISY.

BY A CLERGYMAN'S DAUGHTER.

Who can see or hear the name of the common field Daisy without a thousand pleasurable associations? It is connected with the sports of our childhood, and the pleasures of our youth. We walk abroad to seek it, yet it is the very emblem of home. It is a favourite with man, woman, and child. It is the *robin* of flowers. Turn it all ways, and on every side you will find new beauty. You are attracted by the snowy-white leaves, contrasted by the golden tuft in the centre, as it rears its head above the green sod; pluck it, and you find it backed by a delicate star of green, and tipped with a bright crimson, rose, or blush colour.

> "Daisies with their pinky lashes"

are among the first darlings of spring. In flower almost the whole year, closing in the evening and in wet weather, and opening on the return of the sun—

> " Meadows trim with daisies pied."

Drayton, enumerating a variety of flowers which are woven into garlands by the nymphs to adorn the river Tame on his bridal day, tells us they place

> " The Daisy over all those sundry sweets so thick,
> As Nature doth herself, to imitate her right,
> Who seems in that, her pearl, so greatly to delight
> That every plain therewith she powdereth."

But the field Daisy has become an inhabitant, too, of the flower-garden, where may be seen the " Wee modest, crimson-tipped flower," in its double state, and to the same I am desirous to draw the attention of the reader.

Two writers in former volumes of the FLORICULTURAL CABINET have, however, solicited the attention of florists to the more general cultivation of the lovely double-flowered Daisy, viz., Mr. Goodall, of Rode Hall, in Cheshire, in vol. iii., page 34, and Mr. Mackenzie, of West Plean, Stirling, in Scotland. I was induced by what the latter writer stated to turn my attention to the matter, and though I have only yet obtained six varieties, I am so highly delighted with them that I cannot forbear adding my request too, and hope a list of all the varieties known in different localities may be forwarded to the Editor of this Magazine, so that a general collection might be obtained.

Mr. Mackenzie mentions that more than twenty varieties exist in the neighbourhood of his residence. I should be highly obliged if he would favour us with a descriptive list, or refer us to where the kinds may be procured; and any reader who can contribute to promote my object, and will do so, will additionally oblige me, and I doubt not many others too.

The plan I pursue in cultivating this lovely flower is as follows:—Early in September I divide offsets from the parent plants, and make a plantation along the edges of walks, around the margins of flower-beds, or in patches in the borders. My soil is what is usually termed a medium compact loam, in tolerable condition as to being enriched with old cow manure, that is, such as is generally heaped up from the cow-house; I find it suits this plant better than dung from the stables, being cooler. These plants bloom from the beginning of March to the end of June. About the end of March I make another plantation of them, which comes into bloom by the end of May, and continues to the end of summer.

By the sides of walks they are more affected by dry weather, but I have had application to a pond of soft water, poured over by a water-pot with its rose. I keep the plants in health and beauty. In order to have my walk edges in bloom nearly all the year, I plant the second portion (in March) close behind the first blooming plants, which were planted in September.

During this year my bloom has been exceedingly beautiful; it has continuously given to my flower-garden a cheerfulness and beauty that nothing else could equal.

If I could be the humble instrument of stimulating other persons to the cultivation of this (to me) lovely favourite, it would afford me much gratification. I am far from being alone an admirer of it; some of our most eminent writers have seen so many beauties therein as to induce them, in highly interesting poetic lines, to eulogize my pet flower.

Hoping that the poet's song may effect what I am not able to accomplish, I respectfully request the following extracts may accompany my remarks.

Wordsworth, with a true poet's delight in the simplest beauties of Nature, addresses the Daisy thus:—

" In youth from rock to rock I went,
From hill to hill, in discontent
Of pleasure high and turbulent,
Most pleased when most uneasy;
But now my own delights I make,—
My thirst at every rill can slake,
And gladly Nature's love partake
Of thee, sweet Daisy!

" When soothed awhile by milder airs,
Thee Winter in the garland wears
That thinly shades his few grey hairs;
Spring cannot shun thee;
Whole summer fields are thine by right;
And Autumn, melancholy wight,
Doth in thy crimson head delight,
When rains are on thee.

" In shoals and bands, a morrice train,
Thou greet'st the traveller in the lane;
If welcomed once, thou count'st it gain;
Thou art not daunted,
Nor car'st if thou be set at nought;
And oft alone in nooks remote
We meet thee, like a pleasant thought,
When such are wanted.

" Be Violets in their secret mews
The flowers the wanton Zephyrs choose;
Proud be the Rose, with rains and dews
Her head impearling;
Thou liv'st with less ambitious aim,
Yet hast not gone without thy fame;
Thou art indeed by many a claim
The poet's darling.

" If to a rock from rains he fly,
Or some bright day of April sky,

Imprisoned by hot sunshine lie
Near the green holly,
And wearily at length should fare;
He need but look about, and there
Thou art!—a friend at hand, to scare
His melancholy.

" A hundred times, by rock or bower,
Ere thus I have lain couched an hour,
Have I derived from thy sweet power
Some apprehension;
Some steady love; some brief delight;
Some memory that had taken flight;
Some chime of fancy, wrong or right;
Or stray invention.

" If stately passions in me burn,
And one chance look to thee should turn,
I drink out of an humbler urn
A lowlier pleasure;
The homely sympathy that heeds
The common life our nature breeds;
A wisdom fitted to the needs
Of hearts at leisure.

" When, smitten by the morning ray,
I see thee rise alert and gay,
Then, cheerful flower! my spirits play
With kindred gladness:
And when, at dusk, by dews opprest
Thou sink'st, the image of thy rest
Hath often eased my pensive breast
Of careful sadness.

" And all day long I number yet,
All seasons through, another debt,
Which I, wherever thou art met,
To thee am owing;
An instinct call it, a blind sense;
A happy, genial influence,
Coming one knows not how nor whence,
Nor whither going.

" Child of the Year! that round dost run
Thy course, bold lover of the sun,
And cheerful when the day's begun
As morning leveret,
Thy long-lost praise thou shalt regain;
Dear shalt thou be to future men
As in old time; thou, not in vain,
Art Nature's favourite."

At another time he describes it as—

" A nun demure, of lowly port;
Or sprightly maiden of Love's court,
In her simplicity the sport
Of all temptations.
A queen in crown of rubies drest;
A starveling in a scanty vest;
Are all as seems to suit it best,
Its appellations.

" A little Cyclops with one eye
Staring to threaten and defy,
That thought comes next,—and instantly
The freak is over,
The shape will vanish; and, behold!
A silver shield with boss of gold,
That spreads itself, some faëry bold
In fight to cover."

Montgomery, too, has written in praise of the Daisy; for who that has one sparkle of true poetry does not love it? Some have gone so far as to say, that his praises of this little flower have made it his own for ever.

These lines were addressed to a Daisy found in full bloom on Christmas-day, 1803:—

" There is a flower, a little flower,
With silver crest and golden eye,
That welcomes every changing hour,
And weathers every sky.

" The prouder beauties of the field
In gay but quick succession shine,
Race after race their honours yield,
They flourish and decline.

" But this small flower, to Nature dear,
While moon and stars their courses run,
Wreathes the whole circle of the year,
Companion of the sun.

" It smiles upon the lap of May,
To sultry August spreads its charms,
Lights pale October on his way,
And twines December's arms.

" The purple Heath and golden broom,
On moory mountains catch the gale,
O'er lawns the lily sheds perfume,
The Violet in the vale.

" But this bold flow'ret climbs the hill,
Hides in the forest, haunts the glen,
Plays on the margin of the rill,
Peeps round the fox's den.

"Within the garden's cultured round
It shares the sweet Carnation's bed,
And blooms on consecrated ground
In honour of the dead.

"The lambkin crops its crimson gem,
The wild bee murmurs on its breast,
The blue fly bends its pensile stem
Light o'er the skylark's nest.

"'Tis Flora's page:—in every place,
In every season fresh and fair,
It opens with perennial grace,
And blossoms everywhere.

"On waste and woodland, rock and plain,
Its humble buds unheeded rise;
The Rose has but a summer reign,
The Daisy never dies."

One more passage I will add, and go no further, for it would fill a volume did I collect all the poetical passages relative to this favourite flower.

"Star of the mead! sweet daughter of the day,
Whose opening flower invites the morning ray,
From thy moist cheek and bosom's chilly fold
To kiss the tears of eve, the dew-drops cold!
Sweet Daisy, flower of love! when birds are paired,
'Tis sweet to see thee with thy bosom bared,
Smiling in virgin innocence serene,
Thy pearly crown above thy vest of green.
The lark, with sparkling eye, and rustling wing,
Rejoins his widow'd mate in early spring;
And, as he prunes his plumes of russet hue,
Swears on thy maiden blossom to be true.

"When May-day comes, the morning of the year,
And from young April dries the gelid tear,
When, as the verdure spreads, the bird is seen
No more, that sings amid the hawthorns green,
In lovelier tints thy swelling blossoms blow
The leaflets red beneath the leaves of snow.
The damsel now, with love-awakened mind,
First hopes to leave her infancy behind,
Glides o'er the untrodden mead at dawning hour,
To seek the matin-dew of mystic power,
Bends o'er the mirror-stream with blushful air,
And weaves thy modest flower amid her hair.

"Oft have I watched thy closing buds at eve,
Which for the parting sunbeams seemed to grieve,
And, when gay morning gilt the dew-bright plain,
Seen them unclasp their folded leaves again:

Nor he who sung—‘ The daisy is so sweet,’
More dearly loved thy pearly form to greet;
When on his scarf the knight the daisy bound,
And dames at tourneys shone with daisies crown’d,
And fays forsook the purer fields above
To hail the daisy, flower of faithful love.”—*Dr. J. Leyden.*

ON ARRANGING FLOWER GARDENS.

BY A. B.

To gain a correct knowledge of an object, we must not only see it, but look attentively at it; and so also, if we would arrive at correct notions of the principles of modern flower-gardening, we must exercise our understanding in regard to our object, and have a mental power of carrying the image of the object along with us, before anything like agreeable combinations can be produced. Now, I have observed that a square figure, divided into four triangles, and planted with plants of one height, but of two opposite colours, represents harmony and diversity; and when these are so arranged that the one side of the figure reflects the other, an agreeable effect is produced on the eye, indicating its healthy state, and at the same time illustrating the whole theory of colours. It is a principle of perspective, that a large figure is more imperfectly seen near a person than a small one, in consequence of the rays of light reflected from the large figure passing by the eye; and whether it is a square figure divided as above, or one differently arranged, so as it comes within the intersectional angle thus formed by the eye, the principle of planting in both cases will be the same.

ON THE GROUPING OF BOURBON ROSES.

Mr. Rivers, of Sawbridgeworth Nursery, in remarking upon the grouping of the lovely tribe of Bourbon Roses, says:—Very delicate growers and those of more vigorous habits, if planted on the same bed, as a matter of course, do not assimilate, and have a bad effect. In order to obviate this, the following roses are recommended for their similarity of habit, *grouping well*:—A beautiful bed of delicate blush roses may be formed of the following varieties—Anne Beluse, Madame Nerard, Comtesse de Rességuier, and Reine du Congress. A splendid group of tall crimson Bourbons may be formed with Dupetit Thouars, Le Grenadier, and Julie de Fontenelle. As magnificent crimson roses for a large bed, Mr. R. recommends the following:—Comte de Rambuteau, Dumont de Courset, Gloire de Paris, Oscar le Clerc, and Souchet. Rosy carmine varieties are, Augustine Lelieur, George Cuvier, Henri le Coq, Lichas, and Marquis de Moyré. And now for “ couleur de rose,” last but not least. How profusely in autumn are the following varieties, covered with their large and finely-shaped rosy-tinted flowers—Emilie Courtier, Edouard Desfosses, La Gracieuse, and Madame Marget. Of nearly uniform growth, neither tall nor dwarf, they are the *juste milieu* among Bourbon roses, and ought to have a very large bed devoted to their beauteous selves.

TO DESTROY WEEDS OR MOSS ON WALKS.

BY A PRACTITIONER.

The present wet season will tend very much to the growth of weeds and moss on walks. By the following application I have for several past years kept my walks wholly clean.

I obtained some gas tar from the gas-works, and put a portion into some water, about two quarts of the former to six of the latter. Into that mixture I put a quarter of a pound of arsenic. This being done, I had a small iron stove, and over the fire I fixed a metal pot which held ten gallons. This construction was taken to the walk, and the liquor kept boiling there; the entire surface was then sprinkled over, by means of a water-can and a fine rose, with the boiling mixture. This application will prove effectual, if done once every three years, on gravel walks and on others, in accordance with the circumstances and material.—(*April*, 1848.)

ON FLAX-WATER.

In preparing Flax for its ultimate purposes, it is found necessary to soak it for a time in water. A correspondent in the *Gardeners' Chronicle*, who has had opportunities of witnessing the effects of the Flax-water on vegetation, insects, &c., communicates the following particulars:—

In the spring of 1847 (in two adjoining gardens), himself and a neighbour planted out Dahlias on the same day, and with the usual equal preparatives as to soil, manure, &c., but in the succeeding attention to the plants the correspondent applied Flax-water to the roots of them, and the difference in successful vigour and blooming was most surprisingly in favour of the plants which had been fed with the Flax-water.

"My long acquaintance with Flax led me to observe the effects it had upon waters in which it was soaked, that I found animal life soon became extinct, whether in the running brook or in the stagnant pond; if Flax had been steeped in it, fish and insects alike perished. The knowledge of this fact, together with the recollection of the good effects of such water on grass land, induced me to supply the roots of my Dahlias with small quantities of it; and my anticipations that benefit would result were much more than realized. I also applied Flax-water for the destruction of the green fly, which had previously infested my plants, and after an ablution of this water I was glad to find the extermination of the race resulted. I have proved, too, that this water is beneficial to Hydrangeas, Geraniums, Roses, &c. I am of opinion, if further tried, it would be found valuable; and as I am certain to have Flax-steep-water during the summer season, I shall be happy to accommodate any person who may wish to try its effects with a supply."—*J. H. Dickson, British Flax-cutting Mills, Skinner-street, Bishopsgate, London.*

PRIMULA SINENSIS—CHINESE PRIMROSE.

BY CLERICUS.

THIS beautiful plant, in its species and varieties, flourishes and blooms quite astonishingly when grown in the following compost, viz., equal parts of rich mellow turfy-loam, rough sandy-peat, and well-rotted dung, to which add a good sprinkling of charcoal-dust. A free drainage is essential. In the above, with other due attention as to watering, &c., an ample reward will follow.

MR. LOW'S VISIT TO SARAWAK.

IN our April Number we made some extracts from, and remarks upon, the interesting volume he has written. We again recommend it to our readers, and add the following extracts, as a continuous specimen:—

"On the banks of the rivers, and growing as underwood in the dense jungles, are found many beautiful species of the genera Ixora, and Pavetta, the former with large bunches of flowers of every shade, from orange to crimson, the latter with tufts of pure and delicate white blossoms. Other genera of the order Rubiaceæ abound, and are amongst the most beautiful wild plants; many of these are fragrant. Four species of the Clerodendron also adorn the banks of the Sarawak river, two of them bearing white, one scarlet, and one crimson flowers; one of the white ones emits a grateful perfume.

"The Clerodendron which bears the crimson flowers is the most handsome of them all; it grows to a shrub of ten feet in height, having at the point of every branch a large loose spike of rich crimson flowers; the head of the flowers is frequently three feet in height from the foliage—rarely less than two—forming with the bracts and stems, which are equally crimson, a magnificent pyramid of flowers; each being relieved by a beautifully white centre and the long protruding stamens; the foliage is also fine, being heart-shaped, very large, and dense. This fine species, which is now growing well in England, I have named after Captain C. Drinkwater Bethune, R.N., C.B., whose kindness in Borneo was of the greatest assistance to me, and who, on his return, was successful in introducing some of the finest of the Borneo plants.

"When the Clerodendron has ceased flowering, the crimson bracts and calyx which remain are scarcely less gaudy than the flowers, and each calyx contains within it a four-seeded berry of the richest blue colour. Scitamineæ, an order not much cultivated in England, produces some beautiful plants here of the genus Alpina and others. A fine white-fringed flowered Bignonia is a beautiful and fragrant shrub. An Echites, which produces its handsome blossoms abundantly in

April and May, grows also on the banks of the rivers; it emits a delightful perfume. The beautiful Melastomas grow everywhere in open places, and their soft and pulpy fruit furnishes a never-failing supply of food to pigeons of every colour.

"Of climbing-plants, a new and undescribed species of Bauhinia is the most showy, covering the trees in December with its large bunches of gaudy crimson blossoms. The Hoya imperialis is highly beautiful, its large and rich purple flowers being relieved by the white, ivory-like centre; it is epiphytal. On trees near the river various kinds of beautiful Combretums may be added to these; and Cyrtandraceæ produces species of Lysionotus and Æschynanthus, which yield to none in beauty: that which bears the name of the Earl of Auckland (Lysionotus Aucklandii) far surpasses any others yet known in the size and richness of colouring of the flowers, which are produced in bunches frequently containing twenty-four corollas; it is distinguished from others by its undulate and verticillate leaves, and the woody nature of the stems, which render it more a shrub than others of its genus.

"On the mountains are found plants altogether different from these; there the genus Dacrydium, and others of the order Taxaceæ, resemble the cypresses and firs of our northern clime. Herbaceous plants of great beauty are also found on the exposed and damp rocks, while in mossy places the beautiful golden-leaved Anæctochilus and a new and more beautiful species flourish.

"The celebrated Upas Tree, Antiaris toxicaria, is found upon the island, but not very common. Of a tree which I had an opportunity of observing, through the kindness of Captain Bethune, R.N., C.B., who allowed me to accompany him to Borneo, in May, 1845, and gave me every facility for examining the jungles which the disturbed state of the country would admit, and which were in his power, many absurd stories were related to me by the natives, similar to those published by Mr. Foersch, of the Dutch East India Company, in the 'London Magazine' for September, 1785: and it seems very curious that, having this tree before them, which was surrounded by their graves, they should tell me it was impossible to go under it without dying.

"On my insisting, however, I got one of them to climb up to get me some specimens, but they were neither in flower nor fruit. The poisonous sap flows freely from the bark when tapped, and Dr. Horsfield, whose admirable account of it was first published in the 'Batavian Transactions' (vol. vii.), and afterwards by Sir Stamford Raffles (Hist. Arch. vol. i.), tells us that it is equal in potency, when thrown into the circulation, to any animal poison yet known. Several interesting experiments with it, in prepared and natural states, are detailed in the paper alluded to. The tree is called 'Bina' by the Borneans, and has a fine appearance. The specimen at Borneo was about sixty feet high, with a fine stem, the bark of which was of a very white colour: it was supported at its base by those processes resembling buttresses, which are so common to the trees of tropical jungles.

"A poison of greater potency was said to be manufactured from a climbing plant which grew in the neighbourhood of Bintulu: it is perhaps the same as the 'chitik' of Java—the botanical name of which is not yet ascertained. This was called upas by the natives of Borneo, but I think, with other authors, that upas is a name for vegetable poisons in general.

ON SUMMER TREATMENT OF CAPE ERICAS.

BY JUVENIS.

In a former volume of this Magazine some instructive particulars are given on the culture of Ericas, as practised by Mr. Goode, at that time the excellent gardener to Mrs. Lawrence, of Ealing Park.

I was then induced to visit the place, and subsequently have on several occasions. The Heath-house is a lowish span-roofed one, with upright side sashes, three feet high, and which are constructed so that each of them, on either side, can be opened so as to admit air, and on both sides being thus opened a current is admitted through the house. The plants are placed on elevated beds, so that the beds at the sides, as well as the one up the middle of the house, are about six inches below the bottom of the sash, and thus the plants are fully exposed to the air. This is a most essential thing in the successful culture of this lovely tribe of plants. Healthy plants must have all light possible, to obtain pure colours in the flowers, all air possible, and a free supply of soft-water in the growing season, provided there is a free drainage. Such were the instructions furnished me by Mr. Goode, and his most successful cultivation exhibited their value in operation.

To keep plants bushy whose habit was contrary to it, the leading shoots were pinched off, and laterals succeeded. In the summer standing of the stock not required in the Heath-house, Mr. Goode had them placed in common frames, the bottom being raised up about six inches by bricks, so that a current of air passes through. The sashes were off wholly, except in the middle of a very hot day, when for an hour or two they were put over—elevated, so that they admitted a few inches of space for air over the tops of the plants, and upon the glass a light canvass screen was put as shade. A similar screen was also provided for the Heath-house.

TREATMENT OF HOUSE PLANTS.

Water, air, heat, and light, are the four essential stimulants to plants; water, heat, and air to promote growth, and light to render that growth perfect. Water, heat, and air man can command at pleasure by artificial means; but over light, as an element of the perfect growth of plants, we have less control. To be beneficial to plants, light must come directly from the sun; and, therefore, plants should be so placed that it may act upon them with as little as possible of that refraction and decomposition which it suffers when it passes through glass or any other medium except the open air. Plants grown in the open air, and with such free exposure to the light as their habits require, not only develope all their parts in their proper form, but their leaves, flowers, and fruits have their natural colours, odours, and flavours. Plants excluded from light have not their natural colour, odour, nor flavour; they make little or no charcoal in the woody part, the leaves are not green, and if they do flower and fruit, which is rarely the case, the flowers are pale and scentless, and the fruit is insipid: this has been proved by many experiments, of which the blanching of celery and endive by earthing up, and that of cabbage, by the natural process of hearting, are familiar instances. A geranium placed in a dark room becomes first pale, then spotted, and ultimately white, and if brought to the light it again acquires its colour. If plants kept in the dark are exposed to the action of hydrogen gas, they retain their green colour, though how this gas acts has not been ascertained. Some flowers, too, such as the crocus and the tulip, are coloured though grown in the dark. Light seems to be fully as essential to plants as air or heat; and while it acts beneficially on the upper surfaces of the leaves, it appears to be injurious to the under surfaces, at least of some plants; for, in whichever way a plant is placed, it contrives to turn the upper surfaces of its leaves to the light. Plants in rooms turn not only their leaves but their branches to the window at which the light enters, and a plant may, by turning it at intervals, be made to bend successively to all sides; but such bendings weaken the plant and spoil its appearance.

ON EXHIBITIONS OF TULIPS.

BY DAHL, OF MANCHESTER.

As an ardent admirer of this most beautiful of flowers, I cannot but deplore the little that has been said about them in the last four years of your publication. Since the descriptive catalogue of Mr. Slater in 1842 and 1843, your correspondents seem to have quite lost sight of them. In 1844 and 1845 no mention is made of any exhibition. In 1846 and 1847, through your kindness, we have a list of flowers that were in stands to which prizes were awarded at two Societies' meetings in London, which I have put together, to show what flowers are set most store by, to exhibit for awards; but these are not enough; what is wanted by the fancy is an account of flowers that win in the different localities; and certainly among your numerous readers there must be a considerable number of Tulip-growers, in the north, south, east, and west, who have their days of exhibition, which to my own knowledge cause considerable excitement in the localities in which they take place. I have now a request to make, and I sincerely hope that, for general information, that these gentlemen will comply with it, and that is to furnish you with the result of their exhibitions; it might easily be done, and with very little trouble; the more concise the better. Where shown in pans of nine or twelve, viz., first prize Bazarres—Sans Joi, Surpass Cat, Duke of Devonshire, and Polyphemus. In Byblomens—Holmes' King, Lawrence's Friend, David, and Roi de Siam. In Roses—Catalina, Triumph Royal, Aglaia, and Cerise Belle Forme. Second, third, and fourth prizes in the same way. Where shown in classes it would be quite as easy. This plan, carried out by twenty or thirty Societies (indeed, fifty would not be too many), would be a boon to all Tulip fanciers, be interesting to general readers, and be the means of extending the cultivation of these beautiful flowers, as many more would become growers if they knew what flowers they might buy, in order to give them satisfaction in case they should become competitors; this would be the way to increase the cultivation of Tulips a hundredfold. I now transcribe the list you have given us of the London shows for the last two years, showing how many times each variety has been in winning stands. Of *Bizarres*—Asteria, Surpass Polyphemus, Albion, Selim, Surpass Cat, Lord John Russell, Charbonier, Strong's King, Roi de Navarre, Gloria Mundi, Lachises, Bates' Twenty-four, Hughes' Red Bizarre, and Franklin's Lord Byron, *once;* Fabians, Rising Sun (or Catafalque superior), *twice;* Captain White (or Abercrombie, Sans Joi, &c.), and Ellis's Lord Bloomfield, *three times*; Cato (or Junius Brutus), and Duke of Devonshire, *four times;* Platoff (or Charles the Tenth, George the Fourth, Waterloo, &c.), *five times;* Hutton's Optimus (or Saxe Coburg), *six times;* and Polyphemus, *ten times. Byblomens*—Bijou de Amateurs, Violet Blondeau, Franklin's Invincible, Roscius (or European, Duchess of Tuscany, and Duke of Florence), Washington (or Rodney), Salvator Rosa, Reine de Maueres, Norman's Prince of Wales, Lalla Rookh, Grotius, Lord Stanley, La Belle Negresse, Violet Quarto, Cleopatra, General Barnevold, Musidora (or Brown's Walau), Duke of Northumberland, Pandora, Ambassador of Holland, Belle Actrice, and Howard's Byb, *once;* Ulysses, De Lisle, David, Maitre Partout (or Erin-go-bragh), *twice;* Princess Charlotte, Rubens, Reine de Sheba (or Mentor), and Prince Albert, *three times;* Alcon (or Lord Hawke, Grande Marveille, Alexander Magnus), *five times;* Holmes' King, *six times;* and Roi de Siam, *seven times.* Of *Roses*, La Vandicken, Dutch Ponceau très Blanc, Athalia (or Robinette and Catherine), Walworth, Fleur de Dames, Lavinia, Prince d'Asturias, Rose Astonishing, Manteau Ducal (or Cerise Royal), Goldham's Maria, Mason's Matilda, and Hughes' D. E., *once;* Sanders' Vivid, *twice;* Rose Brilliant (or Rose Camuse and Primobien de Noir), Catalana (or La Tendresse, Cerise Blanc, and Minerva), and Madame Vestris, *three times;* Claudiana, *four times;* Cerise Belle Forme, *five times;* Aglaia, *six times;* and Triumph Royal, *twelve times.* This list proves that the old flowers and the cheapest gain the most prizes, and, at the same time, more of the new-broke flowers are coming on, but not to the extent to beat the old ones out of the field. It shows that old Triumph Royal carries everything before it, and well deserves its place. In the north they have a flower, La Belle Nanette, that has put Triumph Royal a little to the right-about; it is a fine thing, and I see that in Messrs. Lawrance's last printed catalogue they have got it; I think it will be highly prized in the south when it gets into growers' hands. In Byblomens, Holmes' King and Roi de Siam were the leading flowers. Holmes' King is one of the cheapest flowers we have; the best strain of Roi de Siam is not quite so easy to get. Polyphemus, in the Bizarres, appears a great favourite, and may now be called an old flower; but I see that in the pan shown by Mr. Reeves at the Royal South London meeting, in May, 1846, was a Polyphemus and an Albion, which in the north they call Lord Fortescue. When Mr. Slater published his descriptive catalogue, the writer in the *Gardener* was very severe upon him, saying it was the same as Polyphemus; yet in London the two flowers are shown in the same pan: how is this? If the same, the pan of Mr. Reeves, according to the rules of all floricultural societies, was disqualified. Polyphemus was broke at Hampton, and Albion at Manchester; it is true the same breeder might have got to Manchester, but it is a query. If the same flower, how came it to pass the eyes of the judges by the side of the other? if not the same, certainly Mr. Slater was hardly dealt with, and growers have been misled. I am quite aware that it is no uncommon thing for two of the same flower to get into a stand, if grown in a different strain. In two meetings round London where I have been a judge this has happened, but of course disqualified the stands.

I hope, Mr. Editor, that many of your readers will comply with my request, and then the CABINET for 1848 will prove of great benefit to the Tulip fancier.

[We very respectfully unite with our correspondent in soliciting the assistance of our friends as early as possible, whilst the recent blooming, &c., is fresh in the memory.]

MR. HOSEA WATERER'S EXHIBITION OF AMERICAN PLANTS,

KING'S-ROAD, CHELSEA, LONDON.

THIS annual treat has again been prepared by Mr. Waterer, and it was highly deserving a visit. We saw it when in its prime, and at that time it was most magnificently beautiful; the great mass of Rhododendrons, Azaleas, and Kalmias, of all shades of colour, producing a very charming effect. Some of the Rhododendrons were twelve to fourteen feet high, with heads nine or ten feet in diameter. Kalmias eight to ten feet high and nearly as much across. There was an addition to former years in a nicely stocked Pinctum, which comprised good-sized plants of numerous kinds of these truly admirable tribes. The entire exhibition of plants was arranged under a canvass cover, and a temporarily formed garden was constructed into beds, around which were gravel walks, margined with grass. The plants were nicely intermingled, and the whole, when viewed, especially from a raised platform erected at one end of the large centre part of the tent, was quite enchanting. No person can form a just estimate of it but by viewing the collection.

We took down descriptive particulars of what we considered the best kinds, and which ought to be in every collection of those lovely plants.

RHODODENDRON MACRANTHUM.—A pale lilac, each segment of the corolla being tipped with carmine. On the upper part of the flower there is a large stain, or blotch of yellow, with deeper-coloured dots, Each flower is about three inches across, and the heads of bloom are very large. It is a superb variety.

R. FIMBRIATA.—A seedling from Catawbiense; nearly white, with a carmine margin. Very neat.

R. PURPUREA (Catawbiense).—A rich purple, with a yellow blotch. The margin is wavy, giving it a singular appearance.

R. RUBRA (Catawbiense).—Red, with a deep violet tinge. Previous to opening, the outside is in very distinct stripes of violet and carmine. It is singularly pretty.

R. ALBA ELEGANS GRANDIFLORA.—At first the flower is white, with a lavender-coloured tinge. It soon loses the tinge, and becomes a pure white. The flower is of handsome form, and the heads large. It is a very handsome variety, and ought to be in every collection.

R. ELEGANS.—A bright rose, with violet margin. The anthers being white produce a very pretty effect. The blossoms are of excellent shape; it is deserving a place in every collection.

R. BICOLOR.—Nearly white, with a broad belt of violet, and a large blotch of yellow. Very handsome, and of first-rate excellence.

R. ELEGANTISSIMA.—A very beautiful pink, and the flower of excellent shape. It is particularly handsome, and deserving to be in every collection.

R. WATERIANUM.—The centre is white, which is surrounded with violet, and the margin of carmine. The blotch is rose and green, giving the flower a singularly pretty appearance. It merits a place in any collection.

FLORAL EXHIBITIONS.

ROYAL HORTICULTURAL SOCIETY.

May 20.—In our June number we had not space for the entire account of the Horticultural Society's Show at Chiswick. We promised to give the Heaths in our July number. The collection was far the best that has been exhibited this season at any other of the London exhibitions. Our readers will be enabled to make selection of kinds, by the circumstance of their frequency at the shows. It is on this account we insert the list as follows:—

CAPE HEATHS.—These formed an attractive feature of the show, being numerous and in fine condition as regards bloom. A Gold Knightian Medal was awarded to Mr. May, gardener to E. Goodhart, Esq., of Beckenham, for a fine collection of fifteen plants, among which were specimens of Humea, perspicua, Westphalingia, propendens, Cavendishii, daphnoides, a pretty species; denticulata moschata, elegans, depressa, admirably flowered, a rare occurrence; Halicacaba, and ventricosa coccinea minor, perhaps the most free flowering of all heaths.

In the Nurserymen's Class, prizes were awarded, first to Messrs. Fairbairn, of Clapham; and second to Messrs. Rollisson, of Tooting. The former had admirably managed plants of ventricosa coccinea minor, Wilsonii, a fine large-flowered variety; Cavendishii, a capital plant;

delecta, a large plant of ventricosa brevifolia; elegans; a large vestita alba; the pale yellow blossomed denticulata moschata; and suaveolens. In Messrs. Rollisson's group were ventricosa splendens, a pretty rosy-flowered sort; a large and fine Cavendishii; densa, hardly sufficiently in bloom; a magnificent Westphalingia, a beautiful species when well flowered: Beaumontia, and a well-flowered ventricosa coccinea minor.

Collections of nine Cape Heaths were numerous. The best was contributed by Mr. Mylam, gardener to S. Rucker, Esq. It contained mundula; a variety of ventricosa, called prægnans; v. coccinea minor, the red variety of tricolor, Cavendishii, Sprengelii, a distinct and beautiful variety, and others.

In Mr. Taylor's group, which was second, were nice plants of Bergiana and ovata, two pretty small-flowered species.

Mr. Jack, gardener to R. G. Loraine, Esq., who was third, sent specimens of Beaumontia, splendens, perspicua nana, and vestita alba. Other groups of nine plants, all of them creditable to the exhibitors, were produced by Messrs. Malyon, Green, Ayres, Frazer, Pamplin, Pawley, and others. Among these we remarked plants of campanulata, a distinct species, covered with little yellow bells; mirabilis, Thunbergiana, persoluta alba, and a variety of grandinosa, called nana, which appears to be an improvement on the species, more especially in point of habit.

As specimen Heaths, Mr. Malyon showed a large vestita coccinea; Mr. Hamp, gardener to J. Thorne, Esq., a fine Cavendishii; Mr. Bruce, a large and fine translucens rosea; and Messrs. Frazer ventricosa breviflora.

June 10.—The second Show of this season took place in the gardens at Chiswick on Saturday, June 10th. The day was very unfavourable, but the articles exhibited, especially the flowers, were very numerous, and of the highest excellence in point of cultivation. Plants in pots were not naked unsightly objects, but handsome bushy ones, and in profuse bloom according to character. Cut specimens too were not only so many brought together, but a nearer approach to perfection in form than we ever recollect previously seeing. We cannot enumerate all the articles that were shown, but the following comprise the best:—

NEW PLANTS.—By Messrs. Veitch. Hoya (new species), from Moulmein. The branches are trailing, the leaves small, and the flowers are borne in umbels (similar to H. carnosa), having eight to ten in each. The blossoms are of a pure white, with purple centre, very neat and handsome. Being of a dwarfish habit, it will form a suitable plant for any small department.

Browallia Jamesonii, a greenhouse shrubby plant. The leaves are small, similar in form and size to Spirea prunifolia plena. It grows three or four feet high, branching, and blooms freely. The flowers are nearly an inch across, of an orange and yellow colour, changing as they advance. It is very pretty, and will be very ornamental during summer either in the greenhouse or open border.

By Mr. Mylam. Vanda Batemannii. The flowers are a rich purple outside, and golden-yellow within.

By Messrs. Henderson. Chironia glutinosa, a greenhouse plant, with bright rose-coloured flowers.

By Messrs. Rollisson, a new species of Gompholobium, with smallish bright yellow flowers.

By Mr. Green. A new species of Browallia, each blossom near two inches across, blue, with a light eye. The plant appeared of a dwarf habit.

Siphocampylus glandulosus. Three very nicely-bloomed plants were shown. The flowers are two inches and a half long, and of a beautiful rich violet colour. It is very interesting and handsome; a dwarf-growing plant.

By Mr. Plant. Ærides erectum, a very pretty kind.

By Mr. Jackson. Erica Aitonia superba. A fine new variety.

Fine Specimens of Rare Plants.—Gloxinia Fyfeana. A fine specimen, having upwards of twenty flowers expanded, was shown by Mr. Mylan. The upright large flowers, similar in form to Spring Gentian, pure white outside with a rich blue within, render it a most charming plant, well deserving to be in every collection.

Gloxinia Teuchlerii. A very pretty rose colour, with blue streaks and spots. (A plant we now have in bloom has all its flowers most beautifully marked with blue.—Conductor.)

Gardenia Stanleyana. From Sion House Gardens, with thirty fine flowers.

Leschenaultia biloba superba. This variety is a dwarfer-growing plant than the original species. The plant was in profuse bloom.

Abela floribunda, a handsome bushy plant, in fine bloom; its neat rosy flowers being very pretty.

Ixora coccinea, a large plant with twenty-five fine heads of flowers. It was a magnificent specimen.

Large Collections of Stove and Greenhouse Plants.—First, Messrs. Frazer, of Lea Bridge. Polygala acuminata, four feet across, and as high. Ixora grandiflora, of similar height; a beautiful Clerodendron Kæmpferi; an Epacris grandiflora, of large dimensions; a beautifully-flowered Erica ventricosa breviflora, three feet high and as much through; E. ventricosa tricolor, forming a ball of flowers two feet and a half in diameter; Coleonema rubra, three feet and a half high, and covered with pink blossoms; Statice macrophylla; Sollya linearis, on a cylindrical trellis, five feet high; Vinca rosea, and Azalea variegata. Franciscea acuminata; a small, but well-flowered Ixora grandiflora; the pale, yellow-blossomed Erica densa; E. pulverulenta, profusely covered with small pink blossoms; Chorozema varium nanum; Franciscea augusta, a prettier species than acuminata; the large, purple-flowered Everlasting (Aphelexis purpurea macrantha); Boronia serrulata, the yellow-blossomed Gompholobium splendens, a spreading Azalea lateritia, Leschenaultia formosa, a most beautiful Pimelea Hendersoni, the useful Sphenotoma gracilis; the Hoya-like Cyrtoceras reflexum; Dillwynia rudis, Erica Cavendishii, and the white-flowered Pimelea hispida.

Second, Mr. Donald, gardener to Mrs. Lawrence, of Ealing Park. Cereus speciosissimus, seven feet high, and well bloomed; Pimelea decussata, of large dimensions; Stephanotis floribunda, on a cylindrical trellis, seven feet high. A large Erica intermedia; Clerodendron Kæmpferi, Eriostemon buxifolium; Epacris grandiflora; Epiphyllum Jenkinsoni, covered with flowers; Statice macrophylla, Justicia carnea, the double-blossomed Tabernæmontana coronaria, Dipladenia crassinoda, the Tree Statice (S. arborea); Pimelea decussata, a complete ball of pink blossoms, three feet in diameter; the white-flowered Xanthosia rotundifolia, Jatropha panduræfolia, Cyrtoceras reflexum, a good plant of the white-flowered Vinca, Polygala Dalmaisiana, thinly bloomed, Azalea variegata, the purple variety of Aphelexis macrantha, Clerodendron paniculatum, the red variety of Dillwynia rudis, which is handsomer than the species; a white Stylidium and the purple-blossomed Statice puberula.

Collections of fifteen Stove and Greenhouse Plants: first to Mr. Green, gardener to Sir E. Antrobus, Bart., Cheam; second to Mr. Cole, gardener to H. Colyer, Esq., Dartford; 3rd to Mr. Kyle, gardener to R. Barclay, Esq., Leyton. Mr. Green's group was excellent; it consisted of beautifully-grown and well-flowered plants of Dillwynia rudis, Aphelexis purpurea macrantha, Gompholobium splendens, Polygala cordifolia, a large Stephanotis floribunda, Leschenaultia Baxteri, a brilliant mass of red flowers; the yellow-blossomed Erica Cavendishii, Sphenotoma gracilis, a large Phænocoma proliferum, the violet-purple flowered Tetratheca verticillata, a pretty plant when well bloomed; Allamanda cathartica, in beautiful condition; Aphelexis humilis, a Chorozema, and Leschenaultia formosa. Mr. Coles' plants were also fine specimens of cultivation; they consisted of a huge Pimelea decussata, a somewhat thinly-flowered Allamanda cathartica, a blue Leschenaultia, Sphenotoma gracilis, a small well-flowered Ixora grandiflora, a Cape Heath, Azalea lateritia, neat plants of Pimelea Hendersoni and Ixora crocata, a purple-flowered Everlasting, Azalea Gledstanesii, Tetratheca verticillata. Erica Cavendishii and Stephanotis floribunda. Mr. Kyle's two were good plants of Azalea variegata, Statice macrophylla, Clerodendron squamatum, Ixora coccinea, Boronia serrulata, Stephanotis floribunda, Dillwynia rudis, a beautiful little Aphelexis spectabilis grandiflora; Polygala acuminata, thin but well flowered; a fine plant of the Holly-leaved Mirbelia illicifolia, and small plants of Erica Westphalingia, Pimelea decussata, Leschenaultia formosa, Euphorbia splendens, and Erica Cavendishii.

Collections of ten Stove and Greenhouse Plants were numerous. As many as ten were staged, and of these eight were rewarded with prizes. The best in point of merit was that shown by Mr. May, gardener to E. Goodheart, Esq., of Beckenham, Kent. It contained a well-flowered spreading Azalea lateritia; Aphelexis sesamoides; Erica Cavendishii, in good condition; a large and fine plant of Crowea saligna, hardly, however, forward enough; Pimelea Hendersoni; a well-flowered Erica ventricosa alba, three feet high, and as much through; a beautifully blossomed Leschenaultia formosa; Azalea Gledstanesii, and a capital Aphelexis spectabilis.

Mr. Taylor, gardener to J. Coster, Esq., of Streatham, from whom the next best collection came, contributed plants of Aphelexis sesamoides and humilis; Epiphyllum speciosum, finely flowered; Stephanotis floribunda, covered with flower buds, few of which were, however, expanded; Pimelea linifolia and decussata, Polygala cordifolia, Leschenaultia formosa, and Azalea variegata.

Mr. Jack, gardener to R. G. Loraine, Esq., of Wallington, who was third, sent a capital Franciscea acuminata; Erica tricolor, and E. perspicua nana; Epidendrum crassifolium; a well-flowered Ixora coccinea; Aphelexis humilis; the blue and white-flowered Torenia Asiatica; Æschynanthus Javanicus, a pretty species; a beautiful Epiphyllum speciosum, quite a mass of flowers; and Leschenaultia formosa.

The collections of Mr. Bruce, gardener to B. Miller, Esq., of Tooting; Mr. Pawley, of Bromley; and Mr. Malyon, gardener to T. Brandram, Esq., Blackheath; were considered equal in point of merit, and were equally rewarded. Of these Mr. Bruce sent the small white Epacris heteronema, Russellia juncea, Stephanotis floribunda, Aphelexis sesamoides and humilis, Erica depressa well flowered, Pimelea Hendersoni, the ever-blooming Æschynanthus ramosissimus, Sphenotoma gracilis, and a blue Leschenaultia. Mr. Pawley contributed Stephanotis floribunda, trained over a large circular trellis; Oncidium altissimum, Azalea decora, a pretty rosy-pink variety; and Erica Cavendishii. Mr. Malyon the same yellow Heath, the white-flowered Calanthe veratrifolia, Vinca rosea and alba, Ixora coccinea, Phymatanthus tricolor, Erica ventricosa breviflora, Franciscea acuminata, the yellow-blossomed Dillwynia floribunda, and Aphelexis humilis.

Mr. Carson, gardener to W. F. G. Farmer, Esq., Cheam; and Mr. Glendinning, of the Chiswick Nursery, sent collections, to each of which a Silver Knightian Medal was awarded. The former contributed a large Allamanda cathartica, a good Plumbago capensis, a large Stephanotis floribunda, Franciscea latifolia, a nice plant; Jatropha panduræfolia, a large Pimelea decussata, Clerodendron Kæmpferi, bearing a fine panicle of scarlet flowers; and the beautiful Dipladenia splendens, bearing five open flowers.

Mr. Glendinning sent nice plants of Ixora coccinea, Cyrtoceras reflexum, Dipladenia crassinoda; Stephanotis floribunda, Tetratheca verticillata, Erica Cavendishii, E. perspicua nana, and E. ventricosa grandiflora. Of this last, plants were supplied by Messrs. Rollisson, of Tooting, and by Mr. Rucker's gardener; but these were both very inferior in beauty to Mr. Glendinning's plant, whose flowers were not only larger and handsomer in form, but their rich rosy colour was also much deeper than that of either of the plants just mentioned.

The display of Orchids was magnificent, most of the plants being extremely fine specimens. In large collections, Mr. Mylam, gardener to S. Rucker, Esq., of Wandsworth, was the only exhibitor. In this fine collection were Saccolabium præmorsum, with two flower-spikes; S. guttatum, a large plant in a square basket, with fifteen spikes; an Aerides roseum, with five spikes; the red and pale varieties of A. crispum, each with two branching flower spikes; an Aerides, apparently odoratum; Brassia verrucosa, with six spikes; and a huge mass of B. Lanceana; the yellow-flowered Cyrtochilum alatum; the singular

Cirrhæa viridipurpurea; the yellow-flowered Dendrobium sulcatum; Lycaste tyrianthina, with twelve blossoms; a variety of Oncidium leucochilum; O. ampliatum, with two fine spikes of yellow flowers; Vanda teres; the brown-flowered Oncidium crispum; O. Lanceanum, with nine spikes, of which six were in full blossom; Angræcum caudatum, and the brown-flowered Paphinia cristata.

Collections of ten species were shown and rewarded in the following order:—Mr. Plant, gardener to J. H. Schröder, Esq., Stratford-green; Mr. Williams, gardener to C. B. Warner, Esq., Hoddesdon; Mr. Bassett, gardener to R. S. Holford, Esq., of Westonbirt, Gloucestershire; Mr. Donald, gardener to Mrs. Lawrence, of Ealing Park; and Mr. Carson, gardener to W. F. G. Farmer, Esq, of Cheam.

Mr. Plant sent a nice panful of Lycaste aromatica; Coryanthes macrantha, with one open flower; Brassia Wrayæ, bearing ten flower spikes; Saccolabium guttatum, with eleven charming racemes of purple flowers; Maxillaria tenuifolia; the large-blossomed Phalænopsis; the cinnabar-coloured Epidendrum (E. cinnabarium); Saccolabium præmorsum, with one flower spike; Aerides odoratum, and Dendrobium chrysanthum.

From Mr. Warner's garden came a large and fine Dendrobium cærulescens; Saccolabium guttatum, with four flower spikes; Cattleya Mossiæ, with twelve flowers; Epidendrum crassifolium; a fine plant of Brassia Lanceana; Phaius Wallichii, with six flower spikes; Odontoglossum citrosmum, Epidendrum cinnabarinum, Aerides crispum, and a nice Oncidium divaricatum.

Mr. Bassett sent Coryanthes macrantha, with one flower; Oncidium Lanceanum; Aerides crispum, with two flower spikes; the beautiful Cattleya superba; C. Mossiæ, small, but well flowered; a nice Barkeria spectabilis; Saccolabium guttatum; Schomburghia tibicinus, with a flower spike eight feet in length; and a Sobralia macrantha, six feet high and as much through, bearing thirty open blossoms.

Mr. Donald contributed Epidendrum vitellinum; Cattleya Mossiæ; the pale lilac-flowered Barkeria Lawrenceana; Oncidium flexuosum; Stanhopea tigrina; a large Sobralia macrantha, with two flowers on it; Aerides odoratum; a new Mormodes, having a beautiful spike of yellow-brown spotted flowers of great richness, perhaps a variety of pardinum; Oncidium pulvinatum; and Aerides affine.

Mr. Carson's plants consisted of a Dendrobium chrysanthum, more remarkable for fine growth than bloom; a good Acanthophippium bicolor; the rose-coloured variety of Epidendrum macrochilum, Oncidium luridum guttatum, Cattleya intermedia, the somewhat scarce Acineta Humboldti, a nice Aerides odoratum, Gongora maculata, and the queer Scuticaria Steelii.

Collections of six species, for all of which prizes were awarded, were shown by Mr. Beck, of Isleworth; Mr. Jack, gardener to R. G. Loraine, Esq., of Wallington; Mr. Bruce, of Tooting; and Mr. Eyles, of Roehampton.

Mr. Beck's plants were Aerides crispum, Cattleya Mossiæ superba, a new variety of Barkeria spectabilis, with purple-tipped petals, Oncidium stramineum, Zygopetalum crinitum, and Oncidium Baueri.

Mr. Jack produced Aerides crispum, Acanthophippium bicolor, Camarotis purpurea, Maxillaria aromatica, Vanda teres, and Oncidium altissimum.

In Mr. Bruce's six we remarked nice plants of Oncidium flexuosum and Brassia verrucosa.

Of Mr. Eyles' plants the best were Coryanthes macrantha, Brassia Lanceana, Epidendrum cinnabarinum, and Lycaste cruenta.

As specimen Orchids, Messrs. Veitch, of Exeter, showed Sobralia macrantha and Phalænopsis grandiflora; Mr. Green, gardener to Sir E. Antrobus, Bart., a large and fine Dendrobium nobile; Mr. Gerrie, gardener to Sir J. Cathcart, Bart., a noble Stanhopea oculata, producing numerous flower spikes, of which, however, only four were in perfection.

Of rare Orchids, Mr. Mylam exhibited Vanda Batemanni, a glorious species, the flowers of which are purple on the outside, yellow in the inside, and beautifully spotted all over with brown.

Mr. Bassett sent a white-flowered Cœlogyne from Borneo, and Vanda fuscoviridis, a dingy yellow species, pretty, but not striking; Mr. Plant, an Aerides; and Mr. Eyles, a Vanda, apparently a variety of Roxburghi.

Terrestrial native Orchids were exhibited by Mr. Turner, of Hornsey-road. These consisted of Ophrys muscifera and apifera, Listera ovata, Orchis maculata, pyramidalis, and latifolia, Epipactis palustris, Aceras anthropophora, Herminium monorchis, Gymnadenia conopsea, and Platanthera bifolia.

Seedling Pelargoniums.—Topping's Brilliant, a seedling first shown last year. It is a large flower, good form, and a bright scarlet-red, with a dark blotch. It is a fine variety.

Mr. Hoyle exhibited some striking varieties, superior in brilliant colours to any others previously exhibited. His Crusader is of first-rate form, the upper petals having a large blotch, surrounded with rich crimson, and terminating in a light coloured margin; under petals a rich rosy-scarlet, and a violet spot in the middle of each. The centre of the flower is white.

Hoyle's Flora is a fine colour, not equal in shape to the above.

Hoyle's Queen.—Upper petals a large dark blotch, with orange margin; under ones pink, with a white eye. Tolerable form.

Mr. Black, gardener to E. Foster, Esq., showed Gipsy Bride, of first-rate form.

Mr. Beck exhibited one, Loveliness, fine shape, upper petals dark, under ones rose, and centre of flower white.

Pinks were exhibited in pans of twenty-four distinct varieties. In the *Amateurs' Class*, the first prize was awarded to Mr. R. Ellis, of Woolwich, who showed the following sorts:—Heartstone's Prince Albert, Hodge's Gem, Miss Jean, Masterpiece, Ellis's No. 5, Bunkell's Queen, Melona, Ellis's Beauty, Edward Bennet, Robin, Alpha, Lord Brougham, Prima Donna, Norman's Henry Steers, Smith's Diana, Lady Flora Hastings, Duke of Marlborough, King of Purples; Ellis's Henry, 16, and Hero; Legg's Prince Albert, Carr's Harriett, Turner's Beauty.

Second prize, to Mr. J. Halliday, for Beauty of Bath, Turner's

Beauty, Lady Flora Hastings, Church's Navigator, Jenny Lind, Edward Bennet, Jones's Huntsman, Hodge's Gem, Rubens, Parker's Emma, Heartstone's Prince Albert, Kerr's Harriet, Prima Donna, Alpha, Holmes' Coronation, Hodges' Melona, Heartstone's Cray Beauty, Legge's Albert, Bunkell's Queen, Gay Lad, Willmer's Elizabeth, Meade's Susannah, Cousens' Ellen, and Lord Brougham.

In the *Nurserymen's Class*, Mr. Turner first prize; his stand contained Parker's Jenny Lind, Henbrey, Queen, Turner's Beauty, Kerr's Harriet, Turner's Morning Star, Heartstone's Prince Albert, Young's Twyford Rival, Smith's Oxoniensis, Meade's Lady Dartmouth, Kirtland's Gay Lad, Young's H. H., John Bull, Marcis Lucretia, Young's Lady Mildmay, Neville's John Dickson, Walter's Mrs. Fry, Henbrey's Rubens, White's Warden, Hillyer's British Queen, Bell's Benjamin, Parker's Beauty of Bath, Kirtland's Prince Albert, Hodge's Melona, and Meade's Blackheath Rival.

Second prize, Messrs. Norman, Woolwich, for Norman's Merry Monarch, Parker's Jenny Lind, Smith's Goliah and Diana, Henbrey's Rubens, Ellridge's Prima Donna, Hodge's Melona, Ellis's Mary, Parker's Beauty of Bath, Kerr's Harriet, Hale's Queen of England, Pinder's Lady Hallowell, Lockwood's Duchess of Marlborough, Willmer's Prince of Wales, Hodge's Gem, Parker's Lady Flora Hastings, Stow's Elizabeth, Harris' King of Purples, Neville's John Dickson, Locker's Jane Sarah, Colcutt's Ovid, Campbell's Lady Harrington, Kirtland's Beatrice, and Norman's Henry Creed.

The most perfect formed were the following, which we can recommend as fit for any select collection:—Norman's Seedling, Smith's Diana, Wilmer's Laura, Norman's Lord Hardinge, Looker's Seedling, Kerr's Harriet, Double X., Lady Mildmay, Lord John Russell, Smith's Oxoniensis, Kirtland's Prince Albert, Kent Hero, and Melona.

Cape Heaths.—The number shown was immense; they were in fine condition, in the prime of bloom, and in vast profusion.

Collections of fifteen.—*Private Growers.* First, Mr. Mylam, gardener to S. Rucker, Esq. The plants were excellent, in fine bloom, and consisted of ventricosa alba, ventricosa prægnans coccinea, Cavendishii, tricolor rubra, densa, metulæflora, bicolor, depressa, ventricosa grandiflora, tricolor, inflata, and mutabilis.

Second, Mr. May, gardener to E. Goodheart, Esq., for Beaumontia, tricolor, Westphalingia, depressa, perspicua, Massonia, Halicacuba, splendens, Cavendishii, elegans, breviflora, thymifolia, globosa, daphnoides, and Vernoni.

In the *Nurserymen's Class*, the best collection of fifteen was contributed by Messrs. Rollisson, of Tooting, among whose plants we remarked thymifolia, a distinct variety, covered with small purple blossoms; the ventricosa grandiflora, previously mentioned; ventricosa hirsuta, jubana rosea, Westphalingia, prægnans superba, Cavendishii, and pulverulenta.

The next group in point of merit came from the nursery of Messrs. Fairbairn, of Clapham. It contained, among others, nice plants of Massoni, ventricosa globosa, ventricosa alba, ventricosa breviflora, Cavendishii, Sprengelii, and Vernonii, the latter a large-flowered desirable variety.

Collections of nine varieties were numerous. The best was sent by Mr. Green, gardener to E. Antrobus, Bart. The more remarkable plants in this collection were, perhaps, Westphalingia, ventricosa carnea, ventricosa superba, and tricolor.

The next best group came from Mr. Taylor, gardener to J. Coster, Esq. It contained plants of Cavendishii, ovata, Bergiana, translucens, and ventricosa superba.

Among *Nurserymen*, Mr. Ayres, of Blackheath, obtained the first prize with plants of Bergiana, depressa, tricolor, Cavendishii, ventricosa alba, and ventricosa rosea.

Mr. Pamplin, of Lea Bridge-road, was second with tricolor elegans, ventricosa globosa, ventricosa superba, perspicua nana, &c.

As specimen Heaths, Mr. Kinghorn, gardener to Lord Kilmorey, Orleans House, Twickenham, showed a beautiful Cavendishii; Mr. Bruce, of Tooting, a good mutabilis; Mr. Malyon, of Blackheath, ventricosa superba.

Among *Nurserymen*, Messrs. Frazer, of Lea Bridge, produced a vestita coccinea, a wonderful plant, quite four feet high and as much through, each branch ornamented with rich crimson blossoms; Mr. Pawley a good elegans; Messrs. Rollisson a Cavendishii; Mr. Kinghorn a fine Cavendishii; and Mr. Bruce mutabilis.

The finest kinds of Heaths we have seen in bloom at this and the previous exhibitions at Chiswick, Regent's Park, and the Surrey Gardens, are,—

Erica pulverulenta.—A bright lilac-purple, bell shaped, small, but produced in vast profusion.

E. tricolor Dunbariana.—Lower part of tube rose, then white, surmounted with green, and a white tip. It is very delicate and handsome, the flower about an inch and a half long.

E. campanulata.—A pretty yellow, bell shaped, rather small, but being numerouslyborne among the dark green foliage is strikingly pretty.

E. prægnans (ventricose var.)—A bright flesh colour.

E. ventricosa globosa.—White, terminating with a bright pink; large and handsome.

E. tricolor coronata.—Flesh, then green above, and crowned with a white summit. The flowers are borne from nine to twelve together, forming one circled crown, each blossom standing apart at the same distance. It is very pretty.

E. gemmifera.—Orange tube, with green summit; very pretty.

E. Shannonia.—Pure white, the tube being an inch and a half long. It is one of the best grown.

E. inflata.—White, tube an inch and a quarter long. Like the previous one, deserves to be in every collection.

E. Massonia.—Pale orange-scarlet, with green summit, an inch long; very handsome.

E. Vernoni.—White, then rose, and a white summit, the tube being an inch and a half long.

E. depressa.—A pretty greenish yellow, tube three-quarters of an inch long; a neat and handsome species.

E. splendens.—A fine deep orange-scarlet flower, large, very handsome; ought to be in every collection.

PELARGONIUMS were exhibited in fine condition. In the first class for new and first-rate varieties, cultivated with superior skill, the first prize in the *Amateurs' Class* was awarded to Mr. Cock, of Chiswick; his collection consisted of the following sorts,—Isabella, Sikh, Sylvia, Paragon, Painted Lady, Negress, Forget-me-not, the Pearl, Aurora, Zenobia, Orion, and Hebe's Lip.

The second prize was awarded to Mr. Staines, who exhibited Duchess of Leinster, Miss Holford, Pericles, Chimborazo, Clarinda, Marc Antony, Orion, Camilla, Sunset, Minerva, Zenobia, and Favorita.

Mr. Robinson, of Pimlico, received the third prize for Juliet, Orion, Matilda, Hector, Signet, Aurora, Nestor, Sunrise, Sarah, Pearl, Mustee, and Duke of Wellington.

In the *Nurserymen's Class*, Mr. E. Beck, of Isleworth, received the first prize for Centurion, Cracker, Favorita, Emilie, Rajah, Cinderella, Princess, Cassandra, Star, Blanch, Gustava, and Gulielma.

Mr. Gaines was awarded the second prize for Cymba, Admiration, Princess Olga, Forget-me-not, Marian, Glow-worm, Aspasia, Model, Mrs. Brock, Feu de Joie, Florabunda, and Queen of Beauties.

For Pelargoniums in collections of six varieties, grown in 11-inch pots, in the *Amateurs'. Class*, the first prize was awarded to Mr. Parker, gardener to J. H. Oughton, Esq., for Aurora, Zenobia, Sylph, Emma, Resplendent, and Lord Nelson.

Second prize to Mr. Stains, for Queen Philippa, Duke of Cornwall, Pompey, Phæon, and Matilda.

Third, to Mr. Wiggins, gardener to S. Sanders, Esq., Staines. His sorts were Comte de Paris, Lady Essex, Duchess of Sutherland, Regulator, Auguste, and Alicia.

In the same class, for *Nurserymen*, Mr. Gaines was the only exhibitor. His plants were Orion, Emma, Pirate, Shield of Achilles, White Surrey, and Miss Holford.

For Fancy Pelargoniums, in six varieties, Mr. Gaines was the only exhibitor. He showed the following finely-bloomed varieties,—Queen Victoria, La Belle d'Afrique, Anais, Ytolinski, Ibrahim Pacha, and Yeatmaneanum grandiflorum.

HORTICULTURAL SOCIETY, REGENT STREET.

June 6.—Of subjects of exhibition Messrs. Henderson, of Pine-apple-place, sent a Hippeastrum resembling H. Johnsoni, but more brilliant; a magnificent specimen of Pimelea Hendersoni, three feet high, and as much through, and loaded with blossoms; and the best grown plant of Abelia floribunda we have yet seen. The latter is really a plant of great beauty, having a neat clean-looking foliage, and bunches of long rosy-red pendulous flowers. It was and is still known in some nurseries by the name of Vesalia floribunda; but it is certainly an Abelia, whose introduction to our gardens was through Mr. Booth, of Flottbeck, near Hamburgh. It is a Mexican species, and on that account the first botanists who examined it failed to remark its identity with the Asiatic genus. It proves to be all but hardy. Messrs. Henderson wintered it in a cold pit; they stated that it is very subject to red spider if kept in a house or not well exposed to cold. A Knightian Medal was awarded for these.

Messrs. Loddiges, of Hackney, contributed a collection of Orchids, consisting of Dendrobium Dalhousianum, the true Cyrtochilum hastatum, a very different plant from that usually grown under the name; Brassia cuspidata, Saccolabium guttatum, Lissochilus streptopetalus, a rather pretty species; Epidendrum selligerum, Dendrobium pulchellum, Aerides crispum, and the long green-tailed Dendrochilum latifolium. A Banksian Medal was awarded for the three first-mentioned plants. A similar award was also made to Mr. Wood, of Norwood, for a nice collection of Alpine plants in pots; interesting objects having a beauty of their own, hardy, but thriving all the better for the shelter of a cold frame in winter. The sorts were Linaria Hepaticæfolia, Silene quadridentata and alpestris, Alyssum minimum, Potentilla tridentata, Erpetion reniforme, Cotyledon lutea, Gypsophila repens, Thymus lanuginosus, Statice Caroliniana, Saxifraga ceratophylla, Veronica taurica, Stachys corsica, Bellium minutum, Sedum stellatum and dasyphyllum, and Sempervivum arachnoideum. With these Mr. Wood also exhibited a collection of variegated plants.

Mr. Ambrose, of Battersea, showed three seedling fancy Pelargoniums, named Modesta, Defiance, and Garland. Of these the best was Defiance, a pretty dark variety, in the way of Jehu, whose petals have a clear narrow light edge. Modesta was in the way of Queen Victoria, but perhaps an improvement upon that variety. A certificate was awarded Defiance.

Messrs. Veitch sent cut flowers of two kinds of Lathyrus, one with pale straw-coloured flowers of no beauty; the other L. maritimus. Along with these they also sent two plants of a new Oxalis from Peru, having purple flowers with a dark eye, pretty, but not striking.

A seedling Verbena, named Emperor of China, dark red, with a light eye, came from Mr. Ivery, of Peckham.

Mr. Smith, gardener to J. Anderson, Esq., of Regent's Park, exhibited a Guatemala Epidendrum, for which a certificate of merit was awarded. It was stated to have been purchased at one of Mr. Skinner's sales, in 1846. It is extremely sweet scented, and in appearance looks like a large variety of E. fragrans, but may possibly prove an undescribed species.

From Mr. Groom, of Clapham Rise, came various hardy seedling Lilies of a deep brown colour, the result of a cross between the common orange bulbiferous Lily and the Japanese L. atrosanguineum. Though on the whole too much alike, these all differed more or less from one another; some having more colour and some less; some with broad petals, and others with narrow; but their chief merit consisted in their dwarfness, the different sorts varying in height from fourteen to twenty-two inches. The best varieties were Nabob, Vulcan, and Louis-Philippe. A certificate of merit was awarded.

The greatest novelty was perhaps exhibited by Messrs. Veitch, in the shape of a small specimen of Cantua (Periphragmos) dependens (bicolor of the nurseries), the Magic Tree of the Peruvian Indians, a greenhouse shrub of easy cultivation and much beauty. The plant exhibited was however not particularly striking in this respect, for it was young and had but two flowers on it, which only served to show their size and colour, but in its native habitats it is stated to form a branching shrub, each of whose shoots terminates in a cluster of carmine-coloured Convolvulus-like flowers, the tubes of which are yellow, and nearly half-covered by the green calyx. When better grown and well flowered it promises fair to become one of the best of the later introductions of the kind to our gardens. It was rewarded by a large silver medal, and the same nurserymen also received a certificate of merit for a new Dendrobium, from the Indian province of Moulmein. It was nearly related to longicornu, but differed from that species in the flowers being larger, as well as in other particulars; along with it also came a variety of their Java Rhododendron, called flavum, the flowers being considerably paler than those of the species. It has been observed, in regard to this beautiful Rhododendron, and the various Borneo species which also grow on trees, that they would not prove cultivable with us in the ordinary way in this country; but this will probably prove a mistake, for no difficulty has been experienced in growing the species in question, which is naturally an epiphyte; and this being the case, why should not the others, some of which, Mr. Low mentions, are extremely beautiful, be as easily managed? In regard to hardiness, this R. javanicum was stated to be about as hardy as a Chinese Azalea.

Mr. Gaines, of Battersea, showed a seedling Rhododendron, and a plant of Mr. Fortune's Weigela rosea, in tolerably good condition; but although the latter forces well, it becomes too leafy when grown in heat, and the flowers are too pale to make a fine display; it is out of doors that its beauty is fully developed.

Of Orchids, Messrs. Rollisson, of Tooting, sent a nice collection, consisting of Oncidium bifolium, one of the handsomest of the small growing kinds; Cyrtochilum flavescens; Leptotes bicolor, miscalled serrulata; the exceedingly sweet-smelling Brazilian Burlingtonia fragrans; with two pendent spikes of blush-coloured flowers, and a specimen in blossom of Arpophyllum giganteum. The latter is a Guatemala plant of great beauty, throwing up spikes of small purple flowers, which are arranged on the spike something after the manner of those of our spotted native Orchis; but with the most beautiful regularity, looking like a spike of little shells disposed with the greatest symmetry and skill. The plant exhibited had but one flower-spike on it, and that a small one; but in its native country it was stated to produce spikes from twelve to eighteen inches in length, covered with beautiful little flowers. A Knightian medal was awarded for this and the other Orchids.

From the garden of the Society were various Azaleas; a fine mass of Statice mucronata; Clematis Sieboldi flowered well in a pot, and trained down upon itself, so as to render it dwarf and effective, a mode of management by which it has even a better appearance than when on the rafters of a greenhouse; the white-flowered stove twiner Henfreya scandens; various Oncids; the true Cattleya intermedia; two Cape Heaths; Chorozema varium, and its variety Chandleri; the curious New Zealand Parsonsia heterophylla; Boronia viminea, and the hardy white-flowered Fabiana imbricata.

ROYAL BOTANIC SOCIETY'S EXHIBITION.

The second for the season was held in the garden at the Inner Circle, Regent's Park, on June 14th. The day was all that could be wished for, and nearly eight thousand visitors attended. The greater portion of the plants had been exhibited four days previous at the Chiswick Gardens, but they appeared quite fresh and equally beautiful.

New Plants.—Some very interesting plants were exhibited. The new species of Hoya, which Messrs. Veitch had at Chiswick, bearing its lovely little pearl-white flowers, with a purple centre coronet. Messrs. Lucombe and Co. sent the new species of Hoya, which Mr. Low, jun., discovered in Borneo, and named H. imperialis. It is a robust-growing plant, producing its flowers in pendant umbels. The plant had only one umbel, with seven flowers upon it. Each separate flower has a footstalk four inches long, and the face of the blossom is inches across. It is of a very thick substance, and the colour what is usually termed a dull brick-red, with a whitish centre coronet.

Seedling Pelargoniums.

Sparkler (Hoyle's).—Upper petals a large dark blotch, surrounded with a rich deep scarlet, the remainder a vivid orange scarlet. Lower petals a light scarlet. The margin of the upper petals was slightly waved, but in all respects else is of fine shape. It is possible the heat of the temperature had shrivelled the margin of the petal and made it shrink a little. This class of colours was wanted. A general complaint has been made this season by the visitors, that the seedlings of some other principal raisers have such a similarity in colours as scarcely to be distinguishable; this especially applies to the last and present year's varieties. Mr. Hoyle, however, takes the lead with his varieties, and none that we have seen equal them by a considerable degree.

Spark (Hoyle's).—Upper petals a large dark blotch, with a few dark lines radiating from it; the other portions of the petals a brilliant orange scarlet. The lower petals a similar colour, with a very distinct spot of violet in the middle of each. In form similar to Sparkler. Both ought to be in every collection.

Nonsuch (Hoyle's).—Upper petals a deep blotch, shading off to a rosy crimson and a pink margin. The centre of the flower is white. It is of first-rate form.

Flavea.—Upper petals a large blotch, the other portion a rich brilliant scarlet. Lower petals a bright orange, with a violet spot in centre of each. The margin is wavy. It is a most brilliant flower, making a fine show.

Don John.—Upper petals a dark blotch, the rest a brilliant crimson. Lower petals bright scarlet. The margin is wavy. It is a very showy variety.

Princess Helena (Whome's).—Upper petals very dark, with a light pink margin. Lower petals blush. The flower has a white centre. Very pretty.

Violette (Whome's).—Upper petals dark crimson. Lower light crimson, with a light centre; inferior form, but an interesting appearance.

Gertrude.—Upper petals dark blotch with a bright scarlet margin. Lower petals scarlet; the centre nearly white. Very good form.

Dorah.—Upper petals dark blotch, and the other portion orange-scarlet with a lighter margin. Lower petals blush with a light centre. Margin wavy. Showy.

Ruby.—Upper petals dark blotch, and the rest a bright crimson. Lower petals rosy crimson, with a violet spot on each. Good form.

Fiery.—Orange-scarlet with a small dark spot on upper petals. Form inferior.

Zorayda.—Upper petals dark with a white margin. Lower petals white. Form inferior.

Picta.—Upper petals dark with a narrow rosy-crimson margin. Lower petals a bright pink with a rosy spot in the centre of each. Second rate form, but pretty.

Emily.—Upper petals large velvet blotch, with the rest a bright crimson. Lower petals rosy-blush with a carmine spot at the centre of each. Margin slightly waved.

Acheron.—Upper petals dark, with a crimson margin. Lower petals a bright pink. Centre of flower tinged with violet. Form inferior.

Nundee (Hoyle's).—Upper petals dark, with a red margin. Lower petals pale pink. Flower a white centre. Good form, and very handsome.

Christabel (Hoyle's).—Upper petals a large dark blotch, surrounded with rich crimson, and then a pink margin. Lower petals beautiful blush. Flower a white centre. Form very good, but margin slightly wavy.

Queen Victoria (Whome's).—Upper petals dark, with a narrow pink margin. Lower petals bright pink. Flower pure white centre. Good form, large and showy.

Sir J. Hudson (Whome's).—Upper petals dark, with a red margin. Lower petals rosy-red. Centre of flower tinged with violet. It would form a pretty fancy class flower.

Sol (Hoyle's).—Upper petals a dark blotch, with dark lines radiating from it, and the rest part a fine scarlet. Lower petals rosy-pink. Centre white. Good form.

Terpsichore (Hoyle's).—Upper petals rich dark with a pure white margin; lower petals flesh colour. Centre white. Very distinct and showy, the form good, a desirable one for a general collection.

Miss Berns (Whome's).—Upper petals a dark blotch, shading off with crimson, and a light margin. Lower petals rosy-blush. Centre white. Good form.

Mont Blanc, No. 1.—Pure white, the upper petals having a small spot of purple-crimson. Good form.

Marginata.—Upper petals dark with a red margin; lower petals deep rose, with a violet tinge towards the centre of the flower. Excellent form.

Sarah.—Upper petals a large dark blotch, shading off with rich crimson, and a lighter margin. Lower petals rosy-crimson. Centre white. The edge of the flower exhibited was a little irregular, but in other respects fine formed.

Fancy Seedling Pelargoniums.

Florentina.—Upper petals a violet-crimson with a white margin; lower petals white with a violet tinge, and small purple spot at the centre of each. Second-rate form.

Virgil.—Very similar to the last in colour and form, but without spot on the lower petals.

Malibran.—Upper petals with white broad band across the middle, of bright rosy-purple; lower petals white tinged with violet, and having a broad band of pinky-lilac across the middle. Good form.

Defiance (Ambrose).—Deep maroon crimson, centre of flower white, and a white margin. Very good.

Magnifique.—Upper petals dark, with a violet margin; lower petals light, with a broad band of light crimson. Good form.

Minerva.—Bright rose with a violet hue, light centre and margin. Good form.

Hero of Surrey (Gaines).—Upper petals dark with a narrow white margin; lower petals white with a broad band of rosy-crimson across the middle. Petals very proportionate in size, and good outline.

Miranda.—Upper petals a dark crimson and violet, with a white margin; lower petals light ground with a purple tinge and bar. Good form.

Bridesmaid.—Upper petals a rosy purple, with a white margin; lower petals white ground with a spot of purple in the middle of each. Good form.

Modesta.—(Ambrose).—Upper petals a bright rose, with a white margin; lower petals white ground with a lilac tinge. Good form.

Reine des François.—Upper petals a bright rosy crimson with dark lines, and a white margin; lower petals white with a slight spot of rose. The flower is large and of good form.

Madame Alboni.—Upper petals a rich crimson with lilac margin; lower petals a pale lilac and a spot of carmine in the middle of each. Good outline, margin wavy.

Odorata superba.—Upper petals a bright rosy purple with white margin; lower petals white with lilac tinge, and a small violet spot on each.

Madame Rosati.—Upper petals a bright rose with a white margin; lower petals white ground with a violet spot. Good form.

To Nurserymen, for the best collection of 12 distinct varieties of Roses, grown in pots:—1st, to Messrs. Paul, of Cheshunt, for Paul Perras, Cynthia, Madam Plantier, Caroline, Velour's Episcopal, Aubernon, Souvenir de la Malmaison, La Reine, Louis Bonaparte, Comtesse de Lacipede, Belle Marie, and Adele Prevost; 2nd, to Mr. Francis, of Hertford, for Vauban, Persian Yellow, Sophie d'Houdetot, Coup d'Hebe, Chenedole, Paul Perras, Triomphe de Laquin, Fulgens, Great Western, Duc de Cazes, Charles Duval, and Belle Marie; 3rd, to Messrs. Lane and Son, Berkhampstead, for Devoniensis, Letitia, Madame Audiot, Mrs. Bosanquet, Romulus, Phœnix, Baron Prevost, Arlinde, Souvenir de la Malmaison, Bizarre Ma Chere, Comtesse de Lacepede, and Great Western. An extra prize to Mr. Beck, of Isleworth, for William Jesse, Hortense Leroy, Bourbon Queen, General Allard, Great Western, Aspasia, Duchess of Sutherland, Lady Fordwich, Mrs. Elliott, Prudence, Ræsiar, Pulchera, and Baron Prevost.

For the best collection of Yellow Roses:—1st, to Messrs. Lane and Son, for La Pactole, Clara Wendell, Eliza Sauvage, Vicomtesse de Cazes, Ne Plus Ultra, Smith's Yellow, Comte d'Osmont, Sulphurea Superb, Barbot, and Persian Yellow.

Cut specimens of Roses, in 100 distinct varieties, were shown by Messrs. Paul, Lane, Francis, &c. We carefully looked over the whole, and the following were the best, such as are fit for any collection:—

Honore Montmore, La Sylphide, Belle Zizula, French Scipio, New Blush Hip, French Warrieuse, Safrano yellow, La fille de l'air, Louis Phillippe, Souchet, Lady Stuart, La Volup, Eliza Sauvage, D'Agneseau, Madame Audot, Soliman, Letitia, Princess Lamballe, Grandissima, Boule de Nantiel, Malmaison, Great Western, Coupe de Hebe, Bizarre Marbre, General Thiers, Madame Hardy, Victor Hugo, Hortense le Roy, Proserpine, Baronne Prevost, La Reine, Paul Joseph, Charles Duval, Paul Perras, Duchess of Kent, William Jesse, Duchess of Sutherland, Gloire de France, Daphne, Ceres, Augustine Mouchelet, Duc de Valmy, Ann Beluze, Antonine d'Ormis, Felicite, Couronne de Amour.

SLOUGH PINK AND PANSEY SOCIETY.

The annual meeting of this Society was held on June 22, when a number of stands of the best flowers were exhibited in very perfect condition. Of Pinks in the amateurs' class, J. Edwards, Esq., of Holloway, obtained the first prize with fine blooms of Henry Steers (Norman), Goliah (Smith), George Glenny (Bragg), British Yeoman Lord Valentia (Kirtland), Oxoniensis (Smith), Great Britain (Ward), Lady Flora Hastings, Twyford Rival (Young), Whipper-in (Smith), Harriet (Kerr), rose, ex-fine; and Alfred Morrison (Costar). Mr. Turner was first in the florists' class, with Great Britain (Ward), George Glenny (Bragg), Goliah (Hillier), XX. (Young), Whipper-in (Smith), Diana (Smith), Norbury Buck, Alfred Morrison (Costar), Criterion (Cant); Lord J. Russell (Young), Melona (Hodge), and Lord Valentia.

Mr. Smith's prizes for the best pair of blooms of any new flower sent out in the previous autumn, were all won with Whipper-in; the first by Messrs. Bragg and Bright, the second by Mr. Smith, and the third by Mr. Turner.

In seedlings some very superior varieties were shown, and several certificates awarded; of these Jenny Lind, XX., and Smith's Hark-forward, were admired by all.

CAMBRIDGE FLORISTS' SOCIETY.

The June Show was held on the 14th. At this period the Ranunculuses are usually in their prime, and form the principal feature. We feel glad that this very lovely flower is allowed by our Cambridge friends to retain the position it so deservedly merits. A few flowers from Messrs. Tyso, of Wallingford, were sent to the June Royal Botanic Show in Regent's Park Gardens, some of them exceedingly beautiful, and very much attracted the attention and had the admiration of the visitors. We hope the culture and exhibiting of this flower will receive more encouragement from the rich societies.

RANUNCULUSES.

Mr. R. Headly, P.P. . . Mrs. Wyse.

White Spotted.

Mr. Twitchett	Astronomer.
Ditto . .	Ditto.
R. Headly	Diana Vernon.
Ditto . .	Cervantes,
Ditto . .	Maid Marian.
Ditto . .	Cervantes.

Yellow Spotted.

Mr. R. Headly	Tyso's Edgar.
Ditto . .	Ditto.
Twitchett	Lady Jane Grey.
Ditto . .	Saladin.
R. Headly	Benjamin.
Ready .	Nestor.

Crimson.

Mr. H. Green	Gunn's Crimson.
Ditto . .	Ditto.
Ditto . .	Ditto.
Twitchett	Bienfaite.
Ditto . .	Alphonso.
Ditto . .	Bienfaite.

White.

Mr. R. Headly	Pausanias.
Ditto . .	Ditto.
Twitchett	La Favorite.
Ditto . .	Ditto.
R. Headly	Superb White.
Ditto . .	Pausanias.

Yellow and Sulphur.

Mr. R. Headly	Eliza.
Ditto . .	Ditto.
Ditto . .	Cecil.
Ditto . .	Eliza.
Twitchett	Beroth.
Ditto . .	Adrian.

Scarlet.

Mr. R. Headly	Xanthus.
Ditto . .	Ditto.
Ditto . .	Rising Sun.
Ditto . .	Jupiter.
Ditto . .	Alphonso.
Ditto . .	Jupiter.

White Edged.

Mr. Twitchett	Maid Marian.
R. Headly	Athenian.
Ditto . .	Ditto.
Ditto . .	Frank Hastings.
Twitchett	Maid Marian.
Ditto . .	Athenian.

Dark Purple.

Mr. R. Headly	Superbus.
Twitchett	L'Acajou.
Ditto . .	Quixos.
Ditto . .	Superbus.
Ditto . .	Ditto.
Ditto . .	L'Acajou.

Yellow Edged.

Mr. Twitchett	Queen Victoria.
Ditto . .	Ditto.
R. Headly	Herbert.
Ditto . .	Seedling.
Ditto . .	Herbert.
Ditto . .	Seedling.

Rose and Pink.

Mr. Twitchett	Ajax.
R. Headly	Ditto.
Ditto . .	Julius Cæsar.
Twitchett	Ditto.
Ditto . .	Apollo.
R. Headly	Ditto.

Mottled.

Mr. R. Headly	Mrs. Wyse.
Twitchett	Ditto.
R. Headly	Julienne.
Ditto . .	Seedling.
Ditto . .	Mrs. Wyse.
Ditto . .	Ditto.

Purple and Grey.

Mr. Twitchett	Porcia.
R. Headly	Amstamus.
Ditto . .	Ditto.
Ditto . .	Nominus.
Ditto . .	African.
Ditto . .	Nominus.

Orange.

Mr. H. Green	La Claire.
Ditto . .	Cedo Nulli.
Ready .	Ditto.
Mr. Ready .	Orange Brabançon.
Ditto . .	Ditto.
H. Green	La Claire.

Black.

Mr. R. Headly	Naxara.
Twitchett	Ditto.
R. Headly	Black as Black.
Twitchett	Naxara.
R. Headly	Le Vrai Noir.
Ditto . .	Condorcet.

Red and White Striped.

Mr. R. Headly	Le Temeraire.
H. Green	Cœur de France.
Ditto . .	Ditto.
Ditto . .	Madelice.
Ditto . .	Ditto.
R. Headly	Le Temeraire.

Olive.

Mr. R. Headly	Bouquet Sanspareil.
Ditto . .	Gipsy King.
H. Green	Harvey's Olive.
R. Headly	Jaune en Pompadour.
Twitchett	Gipsy King.
R. Headly	Ditto.

White Shaded.

Mr. Twitchett	St. Jerome.
Ditto . .	Ditto.
Ditto . .	Charlotte.
Ditto . .	Ditto.
Ditto . .	La Favorite.
R. Headly	St. Jerome.

Mr. H. GREEN'S DONATIONS.

Nine Roses (various).—1. Mr. R. Boning.—2. Mr. Twitchett.
Six Roses (various).—Mr. J. Boning.
Three Roses (various).—1. Messrs. Hudson.—2. Mr. B. Dickerson.

DIPLADENIA TENUIFOLIA.

MR. GARDNER in his "Travels in Brazil," mentions the Dipladenia tenuifolia of De Candolle which he found growing abundantly on the sandy places between Varzea da vaca, and Angicas. It is a beautiful plant particularly worthy of notice, growing not more than six inches high, with subulate leaves, and pink-coloured blossoms not unlike those of Phlox subulata. It is called by the inhabitants of Sertas, Cauhy, and the tuberous root, which is the size and colour of a large black turnip radish, is eaten by them when cooked, and is said to be very palatable; in the raw state it tastes not unlike a turnip.

ON CULTIVATING FLOWERS IN THE WINDOWS OF DWELLING HOUSES.

This very interesting part of floriculture is rapidly extending, especially in the neighbourhood of large towns. During this season I have had daily excursions around London, and in every direction I have been highly delighted with the magnificent displays of floral beauty which the windows, verandahs, balconies, &c., exhibited. The general class of flowers comprised Geraniums, Fuchsias, Calceolarias, Petunias, Verbenas, Hydrangeas, Heliotropes, Cinerarias, and Roses. These are all easy of growth, and free to flower, producing a gratifying mixture. In such situations, whether in doors or out, the plants are exposed to a high dry temperature, and consequently require larger pots than is usually given in the garden culture; a regular attention to water to the soil, and sprinkling overhead the foliage (not the flowers), is essential, the exposure to dust renders the latter attention most essential, in order to keep open the pores of the branches and leaves. When the pots can be placed in neat wire or wooden boxes, and the spaces between the pots be filled up with neat moss, it preserves the roots from the effects of dry winds, and scorching sun, and an equality of temperature and moisture is obtained. I noticed in my excursions, where this attention was given, the plants succeeded far better than others. I hope the readers of this magazine, whether in towns or villages, will persevere in such a delightful source of enjoyment. It is easily and cheaply accomplished.

GLADIOLUS CARDINALIS.

In a bed of a few square yards I have had no fewer than 500 trusses of these superb scarlet flowers all in bloom at one time. It is generally recommended, in our horticultural and floricultural periodicals, "that when the leaves have died away, the roots be taken up for the winter, and also divided." But the mode which I adopt is as follows:—About the beginning of October, when it was wished to propagate them, I take from well-established plants a ball or cluster of corms, perhaps about a foot in circumference; I plant these balls in beds two feet wide, preferring a somewhat shaded situation, placing the clusters one foot apart, and three or four inches deep, with a little sand round each mass of bulbs. In the course of two or three years the beds are found to be wholly filled with the plants. I have frequently planted them in the above manner, and they have stood year after year without any protection whatever, even in our most severe winters. It is advisable, however, during the first winter after planting, or when the earth is loosened about the plants, to cover the bed two or three inches deep with leaf mould or half-decomposed leaves. When the cluster of bulbs attains to the size of a foot in diameter, it is proper to lift and divide it into three or four portions; for when the balls or masses are too large, the bulbs degenerate in size, and consequently the flowers become smaller. By way of experiment I divided a large ball of corms, and planted them out singly into a bed in the open air; when only two flowers made their appearance the first season, and in the course of the following year they all died away. I believe many cultivators have experienced a similar disappointment. In order to the formation of a permanent bed, I would therefore recommend that roots of different sizes be at first grown in pots, five or six in each pot, and protected during winter in a cold pit or frame, or under the stage of a greenhouse for a year or two, until they swell into a cluster. When the clusters have attained a sufficient size, they may be planted out with safety, and will be able to withstand the winter, as already mentioned.—*Mr. A. MKenzie, in communication to Caledonian Hort. Soc.*

ON PREPARING BEDS FOR THE GROWTH OF FLOWERS UPON LAWNS, &c.

In situations upon lawns, &c., a profuse bloom is a most desirable object, and in order to effect that the best deep tillage is essential. For all strong-rooted plants, such as Pelargoniums, Fuchsias, Salveas, Calceolarias, &c., the bed should be half a yard deep, at least, of good unctuous, but not binding, loamy soil. The fleshy kinds of plants as Lobelias, &c., delight in rotten leaf soil mixed with loam, and the fine hair-like plants, as Heaths and American shrubs, require, what is termed, heath-soil with a portion of light fibrous earth. When the beds are first formed, this preparation will do for two or three seasons, with the usual supply of a portion of well-rotted manure to the loamy and leaf mould beds. What, however, is most essential to the promotion of a fine display of flowers is, that after this period, there should be a yearly removal of a portion of the soil from the bed, and an addition of fresh, of the character each bed requires, whether loam, vegetable, or heath soil. Manure alone may stimulate to vigour, but the fresh soil gives a richness of verdure in foliage; and colours, in flowers, that the former cannot produce, besides a much greater profusion of bloom. I have had twenty years practice as a flower gardener in one of the first-rate establishments in England, and experience has annually confirmed the advantages of such attention in a suitable soil. The best method to pursue, is yearly to obtain, in winter, a proper quantity of fresh turfy soil from the meadow, and heath-soil from the moor, &c. To have it laid up in heaps fully exposed to the weather, where it may receive sun, air, and rain. This being mixed up, as laid at first, with about one quarter of rotten horse-dung, and when for Rose-beds, cow-dung is an excellent provision to reinforce the beds with. This attention will most amply repay by the beauty it effects. I am confident if persons will but give it a trial once, they will not regret, but be induced to continue an annual interchange of the soil.

TO DESTROY ANTS.

BY D. T. E.

Several inquiries having been made relative to a means of destroying ants, I have effectually succeeded with the following method:—A small handful of African or Peruvian guano sprinkled over the place they inhabit, and sprinkle it over with water soon after. Or guano-water applied, one pound to four gallons of water will be strong enough. A few applications will soon effect a complete riddance.

REMARKS ON GROWING PLANTS IN POTS.

Many readers of this Magazine, no doubt, have been visitors for some years of the great floral exhibitions which have been held at Chiswick, Regent's Park, and the Surrey Zoological Gardens. They will have perceived, too, the great difference which has been effected in the growth of the general specimens shown. It used to be the custom to grow the plants with such rapidity that they became most unnaturally high and disproportionate in bulk: towering plants, long straggling stems, leaves few and joints very distant, and a comparative diminution of flowers. To support the weakly-stemmed shoots and flowers, we have seen dozens of sticks in a pelargonium, or calceolaria plant, so much so as to make its appearance like the back of a porcupine. This unnatural system has nearly been discarded, and now we generally see specimens of proportionate busy growth. How is this brought about? Not merely by pinching off the leads in order to produce lateral shoots, but by a slower, natural method of treatment. Too high a temperature in forcing the plant used to be adopted, and the five and six feet spiral plants were the result. It is true in a shorter period a large specimen may be produced; but that is not a proof of the skill of floriculturists. A slow growth, but kept in an equal state, not by rapid fluctuations either in checks one way or the other, will produce plants with short joints, fine close foliage, and a liberal display of flowers. The system of pruning in or stopping the leading shoots, too, of such grown plants, will still be of advantage with those plants especially whose natural habit is not bushy, or when a plant is become too large for circumstances, or has not a symmetrical shape. With slow-grown plants any form is easily obtained, with their due quantity of flowers, and a verdant healthiness. With an undue temperature and rapid growth, ever pruning in and stopping the leads, &c., the shoots will, in proportionate to the increase of heat, be lanky, foliage thin, and flowers few.

CAPE PELARGONIUMS.

During the past season's exhibitions at the Chiswick Gardens we were much pleased to see some collections of these very pretty and highly interesting plants; and we very much desire that our readers will endeavour to promote their general cultivation. An exhibitor on the occasions referred to makes some observations thereon, with the view of a suitable arrangement in showing, &c.:—

"On one occasion this season I exhibited six plants, which were beaten by Mr. Stanly, in whose collection there were well-grown plants of Phymatanthus tricolor, P. elatus, and Campylia holosericea. Now what I wish to observe is, that if the Society is desirous to encourage the cultivation of the high-coloured species, such as Pelargonium ardens, P. quinquevulnerum, P. bicolor, &c., or the more curious but less showy kinds, such as P. triste, P. gibbosum, Jenkinsoni, triquetrum, &c., there ought to be two distinct classes made, because these last cannot, under the best culture, compete with the free-growing and free-blooming Campylia and Phymatanthus tribe. At any rate, the experience of the past season leads me to this conclusion, for the plants I exhibited were more distinct, and, considering the sorts, better grown than those which the judges placed before them. Not that I blame the judges in this instance, for it is very probable, I may say certain, that neither of them had ever previously seen some of the kinds, and therefore they were unable to estimate fairly the comparative merits of the two collections. It is well known to the few who cultivate this tribe of plants that Campylia holosericea and Phymatanthus elatus will attain a larger size in two years from the time of sowing the seed than many of the tuberous-rooted species will in ten years under the best management; unless, therefore, an alteration is made in the mode of showing, or some other method of placing the various kinds on a more equal footing is adopted, exhibitors will confine themselves to a few of the most easily cultivated sorts, and neglect the choicer species. In the list of prizes for 1848, I see they are offered for new hybrids of this delightful class of flowers."—*Gard. Chron.*

WEIGELIA ROSEA.

This new Chinese shrub stands our winter well. We have seen several beautiful bushes of it in profuse bloom this season. Its handsome rose-coloured flowers, with a richer coloured inside, borne in abundance, produces a delightful effect. Its compact neat bushy growth, with its other merits, renders it a most charming plant for a select shrub border or on the lawn. It deserves to be in every collection. With us it grows freely in a light loamy soil on a dry subsoil. In pots we have used loam and peat equal parts.

HYDRANGEA WITH BLUE FLOWERS.

Last season a friend of ours, near Richmond, had a quantity of Hydrangeas, which had for years bloomed rose-coloured flowers. This season he shook the plants quite clear from the old garden soil he had grown them in, and obtained some strong clayey loam from another situation, and potted the entire stock of plants in it. They are now (June) in beautiful flower, and of a handsome *blue* colour. We can supply plants, and soil too, to any who may order, at a cheap rate.

ON FLOWERS.

BY AN OBSERVER.

To an attentive observer of the habits of flowers, it will be apparent that they answer the purposes of the clock, the calendar, and the barometer. Some persons have calculated, to a day, the time of the year when certain trees resume their foliage in a given situation; the same calculations may be made as to the blowing of flowers, and the hour of the day is indicated by many. "Those who are but in a small degree acquainted with botany," says Thunberg, "need not be told that, by the opening and closing of flowers, one may frequently know with certainty, as from a watch, what hour of the day it is, as well as if the weather will be fine or rainy. Plants of this kind are common on the African hills. The Moræa undulata never opens before nine in the morning; and before sunset at four in the afternoon, it closes again. The Ixia cinnamonea opens every evening at four, and exhales its agreeable odours during the whole night. The approach of rain is announced by various bulbous plants, such as the Ixias, Moræas, Irises, and Galaxias; the tender flowers of which do not open in the morning, if rain is to be expected soon; and if a shower is to fall in the afternoon, they close some time before."

"The Hottentots," says the same author, "do not seem to have any knowledge, neither do they take the least account of the course of nature. The only thing they remark is, that every year they see the bulbous plants push out of the ground, blossom, and decay; and according to this almanack they reckon their own ages."

Nor is it only from the bulbous plants that we take these warnings of weather, or learn the hour: the Marvel of Peru is called the Four-o'clock-flower, from its opening regularly at that time. Many of the species of Convolvulus and Campanula, also, have their stated hours of rest; and a variety of other plants too numerous to mention. It has been observed of a species of broom, that it may with propriety be termed an American clock, because it grows there in every pasture, begins to display its yellow flowers every morning at eleven, is fully open by one, and closes again at two.

"Till morning dawn, and Lucifer withdraw
His beamy chariot, let not the loud bell
Call forth thy negroes from their rushy couch:
And ere the sun with mid-day fervor glow,
When every broom-brush opes her yellow flower,
Let thy black labourers from their toil desist:
Nor till the broom her every petal lock,
Let the loud bell recall them to the hoe.
But when the jalap her bright tint displays,
When the solanum fills her cup with dew,
And crickets, snakes, and lizards 'gin their coil,
Let them find shelter in their cane-thatched huts."

Grainger's "Sugar-cane."

This poetical mode of reckoning time was used by Adam in Paradise:—

"As in a shady nook I stood behind,
Just then returned at shut of evening flowers."
Paradise Lost.

Shakspeare counts time, also, by the succession of the seasons;—

"To me, fair friend, you never can be old,
For as you were when first your eye I eyed,
Such seems your beauty still. Three winters cold
Have from the forest shook three summers' pride;
Three beauteous springs to yellow autumn turned.
In process of the seasons have I seen
Three Aprils' perfumes in three hot Junes burned,
Since first I saw you fresh which yet are green."

The same mode was used by that young poet—in losing whom we have lost so much fine poetry that he could not but have written—Keats:—

"Many and many a verse I hope to write,
Before the daisies, vermeil-rimmed and white,
Hide in deep herbage; and ere yet the bees
Hum about globes of clover and sweet peas,
I must be near the middle of my story.
O may no wintry season, bare and hoary,
See it half-finished; but let autumn bold,
With universal tinge of sober gold,
Be all about me when I make an end."—*Endymion.*

The fashion, so long prevalent in this country, of adorning the hair with artificial flowers, is, in some countries, improved upon by the use of the natural. Thunberg describes it as a common custom in Batavia; and Southey, speaking of the women of Paulista, in Brazil, says, "Flowers were an indispensable part of the female head-dress, a natural fashion in a land where the sweetest flowers blossom in all seasons; but the beauty of the costume was destroyed by the odious custom of wearing powder, with which the Paulista women of all ages loaded their heads." Again, he says: "When a stranger is introduced to a Brazilian lady, it is an act of courtesy in her to take a flower from her head and present it to him, and he is expected to return the compliment in the course of his visit.

In some parts of Germany the ladies wear natural flowers, particularly the beautiful blue corn-flower (*Centaurea Cyanus*).

A friend has obliged me with the following lines, paraphrased from the Greek of Meleager. "This delicious little Greek poem," says he, "is one of those which I always seem to scent the very odour of, as if I held a bunch of flowers to my face."

"A flowery crown will I compose—
I'll weave the Crocus, weave the Rose;
I'll weave Narcissus, newly wet,
The Hyacinth, and Violet;
And Myrtle shall supply me green,
And Lilies laugh in light between:
That the rich tendrils of my beauty's hair
May burst into their crowning flowers, and light the painted air.'

HYBRIDIZING FLOWERS.

As the flowers arrive at a state of perfection, we again suggest to our readers the advantages of impregnating the various classes of flowers it is desirable to obtain improved varieties thereof—such as Carnations, Picotees, Pinks, Ranunculuses, Dahlias, Verbenas, Petunias, Pansies, Pentstemons, Lobelias, Pelargoniums, Geraniums, and many other tribes both in-door and out-door growth. With Pelargoniums, Carnations, Pinks, &c., select those that have the best properties. Petals that are of good firm substance, not the flimsy sort, round, and smooth at the edges, &c. By a judicious selecting of colours, almost all the progeny may be nearly calculated upon.

In order to preserve impregnated flowers from intermixture with any inferior sorts, a separate house, or glass case, which is secured by wire framing, or gauze, that bees cannot enter, should be provided. A small bag-cover of gauze we have often used.

ON FAIRY RINGS.

BY A. E. L.

I SHOULD feel much obliged by any information given me as to the best method of destroying what are called Fairy Rings, which greatly disfigure my lawn. I have looked through fourteen volumes of this Magazine in my possession, and the only thing I can find on the subject is at page 91, in vol. vii., which merely states that these Rings are supposed to arise from electricity. I have lately been told that a scientific person has ascertained that a grub is the cause of these Rings; but what I want to learn is how to get rid of them, and prevent a recurrence of such very ugly marks upon the grass. As a subscriber of fourteen years' standing, I have no doubt but I shall be favoured with a reply to my query.

TO DESTROY MOSS AND WEEDS WHICH DISFIGURE WALKS.

BY SENEX.

SEVERAL walks in my grounds were much disfigured by moss and weeds, and to keep them in due order was quite a costly affair. Last year a friend communicated to me the following mode he had adopted most successfully, viz., when the walk was frozen at the surface, and upon it a portion of snow, say an inch or two thick, he took a stiff birch besom, and scrubbed the walk severely, after which it was swept clean. I tried the plan, and scrubbed my walks on three different occasions during winter, and now, after all the past wet season, so encouraging to the growth of moss and weeds, my walks are all I could desire them to be. My friend states that properly attended to for one winter will be effectual for several following years. Be that so, it is most ample recompence if it required such attention every winter.

SLUG-TRAP.

BY A FLORIST.

IN the *Florist* for May I saw mention made of a slug-trap. I tried the plan, and it has succeeded. The description was as follows:—"Take a piece of slate, say six inches square, smooth the ground, and place it flat; on this put a small quantity of bran, and two small stones to rest an upper piece of slate on, and to leave room for the slugs to get between the two pieces. Some will get on the bran, and others lie under the lower slate, both on the ground and attached to the slate itself." It does not require a renewal more than once a fortnight, at least I found it so, with care. I placed several of the traps around my Pinks and Carnations, and they have been preserved uninjured.

MR. GROOM'S TULIPS.

THE collection at his Clapham grounds this season were superb, delighting every person who inspected it. His best bed, about 50 yards long, contained upwards of two thousand. The following splendid sorts were in vigorous bloom, viz., Groom's Victoria Regina, Queen Adelaide, Princess Charlotte, Duke of Devonshire, Duke of Norfolk, Marshal Soult, Baron Gersdorff, Catalina, Polyphemus, Marcellus, Strong's King, Michael Angelo, Bowler's Everard, Brulante, Bacchus, Addison, &c. This noble collection is worthy of more than an annual visit. Every florist who can do it, would be amply repaid by so rich a treat.

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

PINKS should now be propagated by pipings, if not put off last month; the sooner the better. Carnations and Picotees may also be increased in a similar manner. The uppermost shoots from the parent plant are the best for the purpose; they more readily strike root than the very robust ones. Cut through the stem close under the third joint from the top, and dress off the lowest pair of leaves; then insert the pipings in the prepared situation, pressing the soil closely to the stem; but be careful not to bruise it. A somewhat exhausted hot-bed is most suitable in which to put them, having but a slight warmth. A good close loam is the best soil for them striking in; when about to put in the cuttings, a short time before sprinkle the soil over, so as to have it moist: when the surface has dried a little, spread over it about an eighth of an inch of white silver sand, and then put in the cuttings. Small hand-glasses, about a foot in diameter, should cover them, so that the dimensions of each should be marked out before planting. The cuttings do best covered with small glasses, and more especially if the frame sashes are over the whole. When the pipings are watered, at first, or afterwards, always allow them to be tolerably dry before closing them up with the glasses, or they will be liable to suffer by mildew. Some excellent modes of increasing these flowers by pipings, cuttings, and slips, have been inserted in former volumes of our Magazine, and we refer our readers to them, as they are instructions generally for propagating them in the open bed of the garden. The Pink blooms will require attention, to prevent them bursting the pods; this is easily done by strong India-rubber rings; they are cheap, a hundred or more for a shilling, and may be obtained of the booksellers; they allow the pod gradually to open, but prevent its bursting. These are equally applicable to Carnations and Picotees. Matting is often used for the same purpose.

Ranunculuses.—Protect the beds overhead by canvas, or similar covering, so that the flowers are shaded from sun and rain. The bed must be liberally supplied with rain or pond water, pouring it between the plants.

Carnations and Picotees in pots will require regular attention in watering, &c.

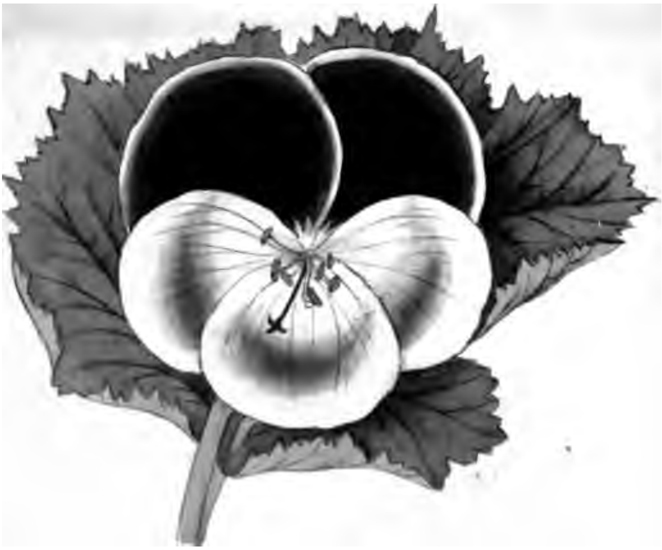
Layering Carnations, Picotees, Mule Pinks, Double Sweet Williams, and similar plants, should be attended to as early as possible. Budding Roses may now be commenced; see articles upon in former volumes. Plants put out in masses, whether they are annual, biennial, &c., or greenhouse plants, as Pelargoniums, Heliotropes, Verbenas, &c., must have all encouragement, by carefully loosening the surface of the beds, giving a free supply of water, &c., at the evening, rain or pond water. Chrysanthemums will require shifting into larger pots. Auriculas and Polyanthuses in pots must be kept in a shady place; do not allow water to be poured into the heart of the plant, or such will very likely be rotted. If attacked by green fly, have immediate recourse to their destruction. Thin away all unnecessary single-flowered Ten-week or German Stocks. Tulips, Crocuses, and similar bulbous plants, &c., will in many instances be perfected, as the foliage indicates the necessity of taking them up; let it duly be attended to in dry weather—See articles upon. Such shrubby plants as are increased by budding should now be done. Sow Mignonette to bloom in September. Pansies increase by cuttings. Ripe seeds should immediately be sown in pots, or a shady border; the soil to be constantly kept moist. Seeds of biennials to bloom next year, as Scabious, Canterbury Bells, Sweet Williams, &c., may still be sown. Cuttings of Dahlias now struck will make good tubers this season.

Roses.—As early as possible bud the Roses; much of the success depends upon it; moist weather the best for the operation. It is of importance that there should be a resemblance between the bud and the stock as to the vigour of vegetative growth, in order to ensure a successful result. If a Rose of slow development is budded on a rampant briar, and all the strength of the latter is turned into the parasitical stranger, health cannot be maintained, nor will a freely vegetating Rose submit to be impeded in its progress by a sluggish stock. Roses budded on the stocks of Boursaults succeed well. Thin away surplus branches from all stocks not budded *as early as possible*, not to wait a day even, but get the branches left strong and healthy.

IN THE GREENHOUSE, STOVE, &c.

The greenhouse, &c., will have to be kept gay with the Achimenes, Balsam, Globe Amaranth, Browallia, Brachycoma, and similar plants; attention to shifting into larger pots will be necessary, so as to keep them growing, and so promote the increase of flowers. Nearly all kinds of greenhouse and stove plants, &c., will now strike freely; the shoots having attained a due firmness. Pelargonium cuttings should now be put off, in order to have plants suitable for next year's blooming. Green fly, red spider, &c., often commence depredations now; remedies must at once be applied. Give all air possible, and shade from hot midday sun; it prolongs the period of blooming. Let the plants be syringed overhead frequently, avoiding the blossoms. Sprinkle the floor twice a-day with water, it materially assists the plants, in cooling the house with a moist air. Azaleas, &c., now finished blooming, should have their growth encouraged, so as to make early vigorous wood for next year's blooming. Amaryllises, and similar plants, which have bloomed, and the foliage indicating maturity, should have less water, &c., so that they may gradually be induced to wither, &c., preparatory to their season of rest; it is a good plan to place them apart from other plants, and if in a frame, near to the glass, or on a back flue, &c., it is advisable to have so circumstanced. Calceolarias that have ceased blooming should be re-potted; cut off dead tops, place the plants in a situation where they can be shaded from hot sun, admitting the morning and evening sun. Some greenhouse and stove plants are readily increased by budding; that should now be done. Cinerarias that have done blooming should have the tops cut off, be fumigated in a close frame, as they are often affected with green fly; after which the plants should be turned out of the pots, and planted in a somewhat raised bed, of good soil, in the garden. Roses that have been forced, and now out of bloom, should be set at rest for a month or six weeks, placing them in a rather shady situation, and endeavouring to prevent the pushing of young buds; after this period they should be partially disrooted, and re-potted in good compost; such plants will generally bloom through the following winter. The tubers of any of the Tropæolums which have ceased blooming, and the tops withered, must be taken out of the soil, or be kept in a bag, &c., or the pot must be put aside, where it may have the soil kept dry till potting time. Greenhouse plants placed in the open air in pots should have frequent syringing at the under side of the foliage, to destroy or keep down insects, &c. The shoots of many of the stove Orchideæ will now be far advanced in growth; they will, in consequence, require a larger supply of moisture in the atmosphere and at the roots than at any other season; this will render syringing and pouring water over the flues, floor, &c., twice or more every day necessary.

Heaths.—The plants which have done blooming require the heads pruning in; do it directly. Do not re-pot them till they have pushed the new shoots; if cut in now and re-potted at the same time, the double operation is too severe for them to sustain, and often results in destruction. Re-pot, however, all that are now prepared for it as *early* as possible; it is of much advantage to provide fine wood for next blooming.



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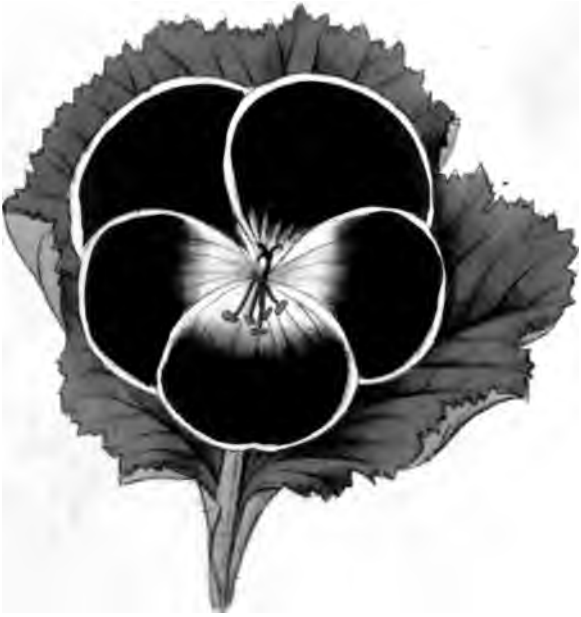
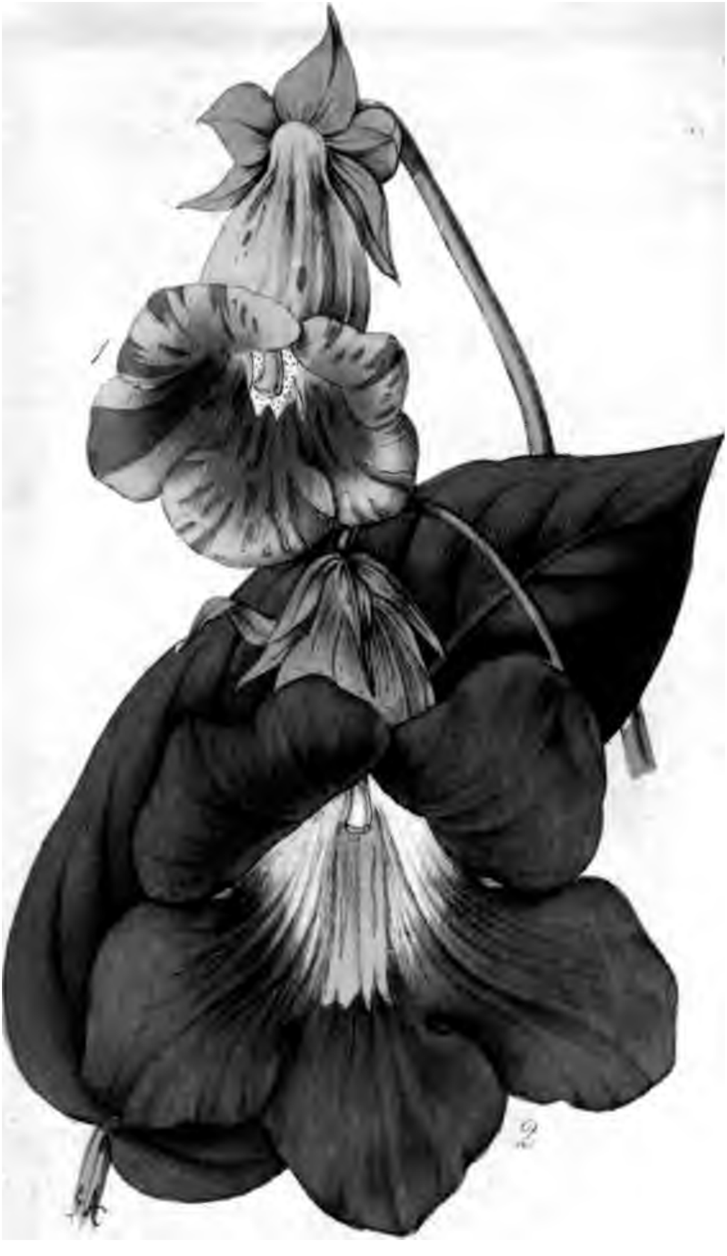


Defiance



1. Gloxinia Teuchlerii _ 2. Chirita Moonii.

FLORICULTURAL CABINET

AUGUST, 1848.

ILLUSTRATIONS.

GLOXINIA TEUCHLERII.

WE are informed that this very pretty variety is an hybrid from G. rubra and G. speciosa. It was exhibited at two of the recent London floral exhibitions, where it was much admired. Occasionally it produces flowers of an entire rosy-red colour, but generally they are beautifully streaked and dotted. It highly merits a place in every hothouse or warm greenhouse.

All the tribe are beautiful and very ornamental, easy of culture, and bloom profusely for many successive months. Each season we are favoured with an addition of kinds, either real species or hybrids, so that now a select collection of superb and most distinct sorts may be obtained at a very reasonable price. We respectfully invite our readers, who have the opportunity, to give attention to raising new varieties by impregnating the best formed and clearest of colours.

Seed sown early in February will produce plants that will bloom the first year, if duly attended to in potting, &c. With little attention an early bloom is obtained, and ample compensation realized for it.

CHIRITA MOONII.

During the present season this very handsome flowering plant has been in bloom in the stove at the Royal Gardens of Kew, where it was highly ornamental. Its large flowers, borne so freely, render it very showy, and deserving a place in every stove or warm greenhouse. We have noticed in one or two collections around London another kind has been obtained for C. Moonii, whose proper name is C. Walkerii. It is much inferior to our present species (now figured), the flowers being about one-third the size of C. Moonii, and not produced in such rofusion.

FANCY PELARGONIUMS.

Hero of Surrey.—A seedling of 1848, raised by Mr. Gaines, of Battersea.

Defiance.—Also a seedling of 1848, raised by Mr. Ambrose, of Battersea.

These very handsome good-shaped flowers were exhibited at the June shows held at Chiswick Gardens, Royal Botanic Gardens, and the Surrey Gardens, on which occasions they were unequalled by any others shown in competition, and both varieties merit a place in any collection, however select.

Considerable attention is now directed to the production of new varieties of this beautiful class of Pelargoniums, the growth of which is becoming extensively popular. Some varieties of very defective forms have been sent out; but such may be replaced by those of approved shape. Every greenhouse ought to contain a collection of this lovely class. They are of a dwarf habit, and profuse in flower.

We have been very solicitous to obtain correct descriptive lists of all the fancy class varieties which have appeared at the above-named shows, and which are given in our three last Numbers of this Magazine, and to which we respectfully refer our readers as a guide to selection in colours, &c.

NOTES ON NEW OR RARE PLANTS.

Acacia argyrophylla—Silver-leaved.

In several of our recent numbers we have noticed numerous species of this most interesting and lovely family of plants, which we had seen in bloom in the fine collection of them in the Royal Gardens of Kew. The present species was sent by Mr. Drummond from the Swan River settlement. It is an erect-growing plant, branching freely, with shortish broad leaves, clothed on both sides with a compact, glossy, silky, and silvery down, the young shoots richly tinged with yellow. It blooms profusely, globe-formed, large, and of a deep yellow. Like all the tribe, they can be so treated as to form neat bushes; and whether so grown, or allowed to form large ornaments for the conservatory, they merit a place wherever they can be introduced, especially where spring and early summer flowers are desired. Both foliage and flowers are handsome. (Figured in *Bot. Mag.*, 4384.)

Acacia rotundifolia—Round-leaved.

A native of New Holland, growing in this country about four feet high, and rather of a loose form. The branches are angled, slightly downy. The leaves are very short, nearly round, about half an inch across. The flowers are borne in profusion, globose, of a deep rich yellow. It is very beautiful when in bloom. It bloomed charmingly in the Royal Gardens of Kew the last spring; it is also in the collection of Mr. Low. It ought to form one of the ornaments of every greenhouse. (Figured in *Pax. Mag. Bot.*)

ACHIMENES VENUSTA—THE LOVELY.

Messrs. Backhouse, of York, have raised several seedlings of this charming genus. The one above named appears to have been raised between A. roseum and A. patens. The flowers are of a rich purplish-lilac, with a bright yellow throat. It is a very free bloomer. A separate blossom is about an inch across. It is a handsome addition. Four others are figured—A. superba, flower light scarlet, with yellow eye, three parts of an inch across; A. grandiflora ignea, rich deep scarlet, with yellow eye, about the size of the last; A. intermedia and A. rosea major, both a handsome rose colour, with yellow eye, and a little larger than the two others. (Figured in *Pax. Mag. Bot.*)

CÆLOGYNE (New Species).

Mr. Low, Jun., sent this new species from Borneo. It has recently bloomed in the collections of S. Rucker, Esq., and of Sir George Larpent. The flower is nearly a yard long, densely laden with cream-coloured flowers, having a dash of bright orange upon the lip. It is a beautiful species.

CANTUA PYRIFOLIA—PEAR-LEAVED.

Polemoniaceæ. Pentandria Monogynia.

Mr. Lobb sent this very beautiful flowering species from Peru to Messrs. Veitch, of Exeter. It is a branching shrub, bearing its flowers in a compound terminal corymbous head. The blossoms are funnel-shaped, the tube being about an inch and a half long, standing erect. The lower portion is bright sulphur, and the top segments white. The upper part of the calyx is a rich red colour, contrasting very beautifully with the other part of the flower. Each head of bloom contains twenty or more flowers. It is a very desirable plant, and deserving a place in every greenhouse. (Figured in *Bot. Mag.*, 4386.)

DIELYTRA SPECTABILIS.

Fumariaceæ. Diadelphia Hexandria.

Mr. Fortune introduced this plant from China. It is a hardy herbaceous perennial, growing about half a yard high, and in China grows among rocks. It is like a vigorous plant of the common garden flower, Dielytra (Fumaria) formosa. The blossoms are of a pretty rose colour, borne in long racemes.

RHODODENDRON NILAGIRICUM—NEELGHERRY RHODODENDRON.

Seeds of this fine species were sent from Nepal to Messrs. Lucombe, Pince, and Co., of Exeter. It is a lovely shrub, perfectly hardy. The heads of flowers are very large, and compact in form. A separate blossom is about two inches and a half across. The interior part of the tube is a creamy-white colour, spotted with red. The other portion of the flower is a pretty pink, with shades of rich deep rose. The anthers are chocolate coloured, which contrast beautifully with the other colours. (Figured in *Bot. Mag.*, 4381.)

RHODODENDRON VERTICILLATUM—WHORLED-LEAVED ROSE-BAY.

Ericaceæ.

This is a very fine epiphytal evergreen shrub, with long fleshy roots, and young branches, slightly downy. The leaves, which are arranged in whorls, are large oblong-obtuse, heart-shaped at the base, convex and revolute at the edge, downy on the stalk and midrib, and thickly studded on the lower surface with minute ferruginous points. The flowers grow in terminal heads, and are between two and three inches long, and nearly two inches across the limb; they are bell-shaped, with an erect limb of five roundish lobes, and of a reddish-crimson colour, without spots. The species is a native of Borneo, at an elevation of 4700 feet, where it was found growing on trees. It is not yet introduced to England.

RHODODENDRON BROOKEANUM—RAJAH BROOKE'S ROSE-BAY.

Ericaceæ and Rhododendreæ.

A most beautiful evergreen shrub, either epiphytal or growing upon moss-covered rocks. The roots are large and fleshy, and the branches are furnished with large, smooth, nearly stalkless, oblong-lanceolate leaves, and loose terminal umbels of flowers; the latter are from two to three inches across the limb, and vary much in colour, from yellow to red. One variety has rich golden flowers, and in another they are rich coppery-red. The blossoms are between funnel-shaped and bell-shaped, with five blunt revolute lobes, nearly as long as the tube. It is a native of Borneo, growing on high trees in damp forests, or on moss-covered limestone rocks, and was introduced by Mr. Low, of Clapton, in 1847. It flowers (in Borneo) from November to July. This and other Rhododendrons will probably adapt themselves to ordinary modes of culture.

RHODODENDRON LONGIFLORUM—LONG-FLOWERED ROSE-BAY.

Ericaceæ and Rhododendreæ.

A beautiful little evergreen shrub, growing about eight feet high, with smooth shining obovate leaves, a revolute edge, and arranged in whorls. The flowers have a long curved tube, and an erect short five-lobed limb, which becomes reflexed; they grow in close heads of nine or ten together, and are fully two inches long, and of an interior crimson colour. It blooms when quite young, but does not grow very freely until it has attained considerable size. When in bloom it is exceedingly beautiful. It is a native of Borneo, growing on high trees, in low, damp jungles, in the vicinity of Sarawak. Not yet introduced.

RHODODENDRON GRACILE—SLENDER ROSE-BAY.

Ericaceæ and Rhododendreæ.

A beautiful slender-growing evergreen shrub, with lance-shaped drooping leaves, from six to seven inches long, indistinctly marked on the lower surface with dark freckles. The flowers grow in a terminal umbel; they are funnel-shaped, nearly three inches long, and about two inches across the limb, which is composed of five blunt, flat, imbricated lobes; the colour is rich fiery-red, with a pale violet-coloured throat; the anthers are deep brown. It is a native of Borneo, on sandstone moss-covered rocks, at the Sirul mouth of the Sarawak river; very local. It there produces its flowers all the year round. As far as we know, it is not yet introduced.

RHODODENDRON JAVANICUM, var. flavum—PALE JAVA RHODODENDRON.

Ericaceæ.

This species is an exceedingly beautiful evergreen shrub, with fine shining, acutely oval foliage, and large terminal heads of blossoms. There are two varieties imported from Java; the one with coppery salmon-orange flowers, the other with flowers of an indescribably curious—but yet attractive—yellow colour, which is named flavum: both are extremely beautiful plants. In Java these plants grow both on trees and in the soil. It was introduced in 1847. The flowers are produced at various seasons of the year.

TROPÆOLUM SMITHII—SIR JAMES SMITH'S NASTURTIUM.

A native of the high mountains of Columbia. Mr. Lobb sent seeds of it to Messrs. Veitch. It is an annual, twining, not succulent, but wiry. The flowers are orange, with red veins and red fringe; the calyx is also of a dull red, and the tip of the spur a rich green. A separate flower is about an inch and a half across. A pretty, interesting species.

VRIESIA SPLENDENS—THE SHOWY.

Bromeliaceæ. Hexandria Monogynia.

This handsomely marked plant has been received into the Royal Gardens of Kew, from the Jardin des Plantes, at Paris, under the name of Tillandsia splendens. The leaves are of the Bromellaceæ (Pine-apple plant) order—a deep green, with black transverse bands. The flower scape rises about half a yard high, terminating in a compact, lanceolate, bright red, glossy spike of tiled bracts, each including a single small white flower. Its entire appearance is very pretty. (Figured in *Bot. Mag.*, 4382.)

ON THE CULTIVATION OF THE BOUVARDIA TRIPHYLLA.

I HAVE at this time one hundred plants of it in full blossom in my flower garden, fifty of which are only from roots of last year's propagation; and many of these flowered the same season, although not planted till April. This year they will become strong flowering plants towards the autumn, after the first bloom is over. My method of treating them is as follows:—About the middle of April I collect all my Bouvardias together from the places where they have been kept through the dormant season, some among my orange tubs, others in cold frames, and others under the stage of the greenhouse. I turn them all out of their pots, shaking the soil from their roots. I trim off most of the large roots, yet retain as many of the fine fibrous ones as possible. I likewise at the same time cut down all the former year's shoots, retaining only two, three, or four eyes on each, according to the strength and age of the plant. I then plant them in pots suitable to the size of the plant, taking care neither to overpot them nor to cramp the roots by confinement. When I have got all potted and watered to settle the earth about their roots, I place them in a cold frame, which I cover with hay and mats at night. I keep the lights close during the night, and even in the day, unless the sun is very strong upon them, till they begin to grow, when I give them portions of air according to the day and their advance in growth. Subsequently I leave the lights off through the day, and at last do not put them on at night. About a week after they have been thus exposed, I plant them finally out for the season, either in clumps to themselves or distributed among other plants, when they are soon in fine bloom, and continue to flower till Christmas. By the autumn some of the year's shoots will have attained a yard in length, and will be crowned with fine luxuriant clusters of their splendid trumpet-like flowers. The beauty of the plants thus treated has been the admiration of those who have long known the plant, but have only seen it managed in the usual way; under which one or two of them are kept stinted in pots, in which its flowering season soon terminates, and its blossoms are not so attractive as those of the scarlet Trumpet Honeysuckle.

As soon as I apprehend frost, I take up the plants with balls of earth attached to the roots, and place them carefully in pots, with good mellow soil. When they are thus replaced in pots and watered, those which are in luxuriant blossom I mix among the greenhouse plants, where they make a splendid appearance till January.

I continue the treatment of them as above stated, and it may be continued for many years, for the application of fresh soil, the trimming of the old roots, and the great luxuriance gained by growing in summer in the open ground, renovate the plants, which could not be done by any other means of culture.

I propagate the Bouvardia by cutting of the roots. I fill some large fruiting pine pots with good fresh mellow loam, well blended with either thoroughly rotten dung, or vegetable mould. I plant my roots all over the pot, beginning in a circle round the outside, opening the soil, and planting them with my finger, and continue filling up one circle within another, till I finish in the centre of the pot or pots, leaving no more of the roots visible above the surface than just the top. I then water and place them in a hothouse at from sixty to seventy degrees of heat by night. As soon as the shoots get to between four and five inches high, I transfer the plants singly into pots of a small size, and by degrees harden them after they have got established. When they have made some progress, I plant them out into a bed four feet wide, eight inches between the rows, and four inches in the row, where, if the soil be good, many will soon be in flower. I pot them again before frost, and treat as done to older plants. There ought to be a bed of this beautiful flower in every flower garden or parterre.

ON THE CULTIVATION OF THE PELARGONIUM.

BY MR. COCK, OF CHISWICK.

FOR several successive years Mr. Cock has obtained the first prize in the amateurs' class of Pelargoniums at the Horticultural and Royal Botanic Societies' shows. The following is the method of culture he pursues, and with such admirable success:—

1st. My usual custom is to strike the cuttings the beginning of June, or sooner if my plants are sufficiently strong to allow my taking two or three shoots off without injury. As soon as they are rooted I pot them in 60-sized pots, and remove them to a shady situation, or place them in a cool frame, shading them constantly when the sun is out, until they have taken fresh roots. They are next transferred to an open situation, and placed on slates or boards. As soon as the plants will bear the sun without flagging I stop them. In September I repot them into 48-sized pots, and at that period I commence training them into the form I intend them to have. In December or January those which are sufficiently strong are shifted into 16-sized pots, allowing plenty of potsherds for drainage; the others I do not shift till March. In these pots they remain to flower. About the middle of July or the beginning of August I cut them down, and place them in a shady situation to keep the sun from drying the soil too fast; water is now applied very sparingly. As soon as the plants have thrown out shoots an inch long, the soil is nearly all shaken off, and they are repotted into the same sized pots; when they have taken fresh roots the superfluous shoots are thinned out; in this state they remain until they are removed into the greenhouse.

2nd. Treatment when in the greenhouse. The plants I intend growing for exhibition are placed on the stage at least four feet apart; air is liberally supplied; where the situation will allow it, the front sashes should be left open all night, while the weather will permit. In November the plants are stopped; a stick is then put to each shoot to make the plants uniform, and the leaves are thinned out to allow the air to pass freely through the plants. In December or January the strongest plants are again selected, and repotted into 8-sized pots; additional heat should then be applied to enable the plants to root quickly. In February I commence syringing them; this is done early in the afternoon, so that the leaves may dry before night. In March they are again repotted into 2-sized pots, allowing a larger quantity than before of potsherd for drainage; water is now very liberally supplied. When the flowers begin to expand, they are shaded on the outside of the house with cheesecloth, which I consider better than canvas, as it admits more light, and the temperature will not be higher. Air should always be admitted before the sun has much power on the glass; this precaution in a great measure prevents the appearance of the green fly.

3rd. In applying fire-heat the greatest care is required, for on this success will in a great measure depend. The system I have pursued for four successive years is to light the fires at three or four o'clock in the afternoon, sometimes later, as circumstances may dictate; the fires are allowed to go out at eight or nine o'clock, by which time the temperature ought to be forty or forty-two degrees Fahrenheit, which is amply sufficient. I again relight them at three or four o'clock in the morning, by which means the plants are never overheated, as is frequently the case when the fires are continued until a later period in the evening.

4th. Preparing the soil. Having obtained a quantity of loam with the turf, it is chopped up with a spade and placed in a heap. I then procure a large quantity of fresh stable-litter, and shake it up lightly into a heap, in the form of a mushroom-bed. If the weather is hot and dry at the time, it is well watered with strong manure water, and covered over with slates as closely as possible, to keep the ammonia, &c., from disengaging. In this state it remains for fifteen or sixteen days. I then put to every barrowful of loam one of dung, covering the heap slightly over at last with loam; in this heap it remains for a month or five weeks; it is then turned over three or four times, in order that the loam and dung may be well mixed together; in twelve months it will be fit for use. To two barrowfuls of this compost I add one of leaf-mould and a peck and a-half of silver sand.

ON DESTROYING ANTS.

Being from home some time, I had not the opportunity of reading my May Number, in which I perceive a query respecting Ants; and if you think my experiment likely to be of any utility, or worthy of insertion, I shall feel very glad in having it in my power to tender a trifle to so generous and valuable a work. I have a large garden, two-thirds of which is a kitchen garden, the other a flower garden. I had some valuable apple trees in the larger one, from which, for three years, I could obtain no fruit; the bloom was abundant, but as soon as it set, and got a little size, it nearly all fell off; and on very strict observance one day, I perceived the trees were all infested with thousands of Ants; on speaking of it to a clever old gentleman in gardening, he said that tar was the only preventive to those insects, and that I must tar the trees about three or four feet high from the ground. Accordingly the next day I had it attended to, by having a pot of tar brought into the garden and an old paint brush; fearing this might injure the bark of the tree, I had a ring made of it quite round the trees next the earth; and when it was getting dry, had a ring pressed down hard on the earth, close to the tree, which answered as well. I soon perceived the Ants would not touch it; the smell seemed to annoy them, for scarce any were caught on it. The next thing was to destroy the insects; and as I knew lime would kill small insects, I had a large tub of lime (finely sifted with a hair sieve) brought and kept there. Their haunts are easily traced, but will require, for the first time dressing, a man and a boy. Where there is a great quantity of these marauders they make their roads very frequently across the paths, which, being soon perceived, will direct you to their haunts. Where they enter, by small apertures in the ground, having ready a sieve full of lime and a water-pot full of strong lime-water, take a spade and gently turn up the earth till you come to the Ants, which will be found in immense numbers; sift the lime over them immediately; this confuses them. Rake the earth on them quick, and water over well with the water-pot; this first dressing is some trouble, but afterwards a boy can do it as well, if shown how to leave the earth neat. The next summer we pursued the same plan, but did not find half the number of insects, and the next a very few; and afterwards had no further annoyance from them, but plenty of fruit. The White Currant trees they attacked when in full bloom, which nearly all fell off; the flowers did not suffer much from them, except the succulent kind. As to Balsams, I could not get one to bloom; in my observations of them I perceived they attacked the stalk of the fruit or flower, next to the tree, and by sapping out the juice, which should nourish the fruit or flower, caused it to decay and fall off. Upon taking up some of the fresh-fallen apples, and cutting through the stalks, I found them dry and spungy.

ON THE CHINESE PRIMROSE.

The Royal Caledonian Horticultural Society very laudably encourage practical gardeners to write on subjects connected with horticulture, and such communications are publicly read in the hall at the quarterly meetings of the Society. Honorary premiums are awarded for such as are judged worthy. The papers are printed and circulated among the members.

The following appeared with others (principally on fruit and vegetable culture) in the Society's recent quarterly publication:—

" *On the Cultivation of the Chinese Primrose.* By Mr. John Hankin, gardener to Rear-Admiral Mitford, Hunmanby Hall.

" The method pursued by me in the raising of the Primula sinensis from seed and its subsequent management is as follows:—

" About the first week in July I sow the seed in shallow pans, in light sandy soil, without any manure. The seeds are sown very thin, and pressed down on the surface, so as merely to be covered with the soil. After a gentle watering, the pans containing the seed are removed into a hotbed, where they remain until the young plants are about one inch in height. At this stage of their growth they are pricked out into the same sort of pans, one inch apart. The soil at this time used consists of one-third leaf-mould to two-thirds of the same soil as used in sowing. The plants are put into the hot-bed again until they have attained the height of two inches. They are then taken out of the pans, and shifted into pots five inches across the top, and particularly well drained. The compost for this and their final shift consists of equal quantities of cow-dung two years old, leaf-mould, peat earth, and sandy soil. After potting, the plants are removed into a cold frame, with an eastern aspect. The sashes are kept close for a few days, and the plants are shaded from the mid-day sun until they commence growing. Air is then admitted, gradually at first, but as soon as I perceive the plants to be fairly in a growing state I give air freely; I never, however, neglect to keep the sashes above the plants to ward off heavy rain, as nothing is so destructive to Primulas as water overhead at any period of their growth. As the plants begin to fill their pots with roots, I give them liquid manure, made from pigeon's dung, once a-week, but only to those plants that are vigorous and healthy. I allow the first flower-stem to rise, but only for the sake of judging the merits of the flower. As soon as that is decided, the good flowers are picked out, and when the pots are filled with roots the plants are finally shifted into pots from eight to twelve inches across the top, and treated in precisely the same way as the former shifting, and with the same situation and aspect. The plants remain in the cold frame until the middle of October; after that they are brought into their winter quarters to flower in the greenhouse. As soon as I am able to judge that the plants do not increase in size, I withhold the dung-water, as a continuance of it would likely destroy them in the winter months."

The conduct of this excellent Society in this particular is worth following by all other societies on gardening, &c. It is useful both to the writers and also the readers of their productions.

ON INCREASING GREENHOUSE AND OTHER CURIOUS OR RARE PLANTS BY INARCHING OR LAYING.

BY A PRACTITIONER IN ONE OF THE PROPAGATING DEPARTMENTS IN A LONDON NURSERY.

THERE are many of the most curious and splendid flowering stove, greenhouse, and hardy shrubs, which are only to be propagated by the methods of either inarching or laying them, or, if they can be struck from cuttings, they seldom grow in a healthy condition afterwards. But a weakly-growing species, inserted upon the stock of a free-growing kind, will cause it to bloom far more profusely and vigorously. An additional advantage, too, is afforded by being enabled to obtain a plant of considerable size in a short time. I have, therefore, drawn up some practical observations upon the method which I have pursued most successfully for twelve years.

Inarching is a species of grafting, differing from it in these particulars, that whereas, in grafting, the scion is at once totally separated from its parent plant, and the head of the stock is cut clear off before the splicing takes place; here, on the contrary, neither the scion is separated from its parent, nor the head of the stock cut away, until the union becomes so far complete that the first is unnecessary, and the latter injurious. It is in consequence much preferable to the common grafting, for evergreens in particular; it is principally practised as the best means of multiplying all the double varieties of Camellia, and plants of similar habits; because their strong leaves, if only for a few days deprived of their regular support, by being cut clear from the mother stock, if not covered closely with a glass, will be certain to wither and fall off; after which, there will be but very slender chance of the scion's completing an union: it is performed as follows:—

Having provided a stock, which should always be some of the coarser, free kinds, of the same genus of plants, and nearly of the same diameter as the shoot which is intended for inarching, cut a thin slip, from two to three inches long, and about one-third or something better of the whole thickness, smoothly off from each of them, in the clearest part of the stem, with a small sharp knife (a most necessary instrument for this business); the bark of each must then be fitted together in the most exact manner, at least on one side, and tied perfectly tight with good matting; they must be clayed in the same manner as grafts; and, as being within doors in a warm house will occasion the clay to become over dry, and liable to crack, they should, at least in dry weather, receive two or three times a-week some water from the rose of a water-pot, or by means of a syringe, to preserve it in a proper moist state, observing to do it in the evening, lest the leaves should get scorched by the rays of the sun: a little moss tied neatly round each ball of clay will prevent the water being so frequently necessary, which is, in my opinion, very desirable. Eight or ten weeks will, in general, be found sufficient time for them to unite; at all events by that time, I think, they may be partially separated from the parent plant by cutting the inarched shoots better than half way through; and if, on trial, they are found to be united, and bear that operation well, they may in a few days afterwards be entirely cut off and placed in a shady part of the house, where they must be kept moderately syringed, as before, and some additional shade given, according to the state of the weather, for two or three weeks, during which time they may be untied, and the top of the stock cut off in a neat manner, and also any unnecessary part of the bottom of the scion that may remain. Let a little clay be again applied, that these fresh wounds may have sufficient time to become properly healed, which will take place in a few weeks. In this manner have I succeeded with Myrtus Pimento, and other plants allied to it, which are particularly difficult to strike or propagate by any other means, on the common Myrtle, with tolerable success; and also many other plants of the same description upon their kind.

In laying, choice should be made of the young tender shoots of the present year, the soft bark of which will sooner form a callosity, and produce roots, than that of any of the preceding year's growth. It is particularly necessary to observe, whether the plant intended to be layed is of a brittle nature or not, for, if it is, it will be necessary that the shoots be pegged gently down to the surface previous to laying, and thus left, until their tops naturally acquire a perpendicular direction, which they will do in a few days; without this precaution, it will be extremely difficult to tongue them without cracking or breaking them off; but if treated in this manner, the most brittle may be layed without danger.

By tongueing is meant the operation of cutting a small longitudinal scalp, about half an inch in length, on the inner side of the heel, or bend, which is to be inserted in the earth; about one-third of it should be cut off in a transverse direction, it being so placed that the transverse cut may be immediately on or below the joint; but by no means is the whole of it to be cut away, as practised by some, it being the part which in most instances produces the first fibres. Having the layer thus prepared, the earth must be opened with the hand about three or four inches deep, and in the direction of the shoot, into which opening it would be advisable to put a little fresh loam or sand, for the immediate reception of the layer, which should be fixed therein at least three inches under the surface; the tongue should be gently twisted sideways, so as to prevent its resting within the heel or bend, and the mould immediately closed tight over it. As many layers as are wanted being thus made, let the whole have a moderate watering, to settle the mould, and be set or plunged in a good growing heat, as it is of considerable importance to keep the parent plant in a free and thriving state.

There are many plants which produce roots so freely, that should a branch even touch the surface of the ground, they strike almost immediately; these every gardener will soon become acquainted with by their natural efforts, and, therefore, will find it sufficient for their increase merely to insert them in the mould, noting, however, that a slight twist on the part inserted will considerably promote their rooting.

It is a conclusion drawn from several experiments that the layer which is inserted to a proper depth roots sooner and better than that which is layed nearer the surface; the self-evident reason of which is that the deeper they are the air is better excluded, and there is a more regular degree of moisture for the nourishment of the young fibres when they make their appearance. I must also observe that no part of the shoot should on any pretence be covered with the mould, except that which is meant to produce roots, as the covering of the whole renders it extremely liable to rot; therefore, if any particularly tender plant should happen to be thus treated, it would evidently endanger the whole stool. This may seem an unnecessary observation to some, but I can assure such that I have seen layers made by people, who thought themselves extremely clever, where none of the parent stool were left in sight, except the tops of each individual layer: what was the consequence? in a few months, one-half at least of the stools were without the least spark of life remaining; and of the rest which were so fortunate as to survive, perhaps not one-tenth of the shoots layed produced plants.

ON WATER PLANTS.

BY SENEX.

The beautiful flowers of some of the water plants do at least equal, if not surpass, many of our most curious land plants, and especially those in the West Indies. I am persuaded many curious persons would have made plantations of them, if they had known how to have done it; but though America exceeds us, yet we are not without them in England, as the Water Lilies and Ranunculuses of several kinds, that are so frequently found in our rivers and ponds, and especially in Cambridgeshire, where there is a great variety.

Water plants may be cultivated in gardens, although there are neither ponds, rivers, or springs in them; and I recommend the doing of it in the method following.

Either in garden pots glazed, without holes, or in troughs or cases of wood, of oaken boards two inches thick, six feet long, and two feet wide, and two feet and a half deep; if they are for large plants that grow under water, the troughs need not be so deep. The corners of these troughs should be strengthened with iron, and the inside should be well pitched, and the outside painted.

These pots or troughs should be filled one-third part with common unmixed earth for Water Lilies, or pond weeds, or such as require depth of water for their leaves to swim in.

And for Water Arums, Water Plantains, and Ranunculuses, which love not so much depth of water as the former, they may be filled two-thirds with the same earth.

And as for those water plants that grow in bogs and marshes, the pots or troughs may be filled with the earth within five inches of the top.

This may be performed in April, when the water plants begin to appear, which may be planted from that time till the middle of June; and the vessels may be filled with water as soon as the plants are put into them.

It ought also to be observed that many of the water plants are erratics, swimming about from place to place, as the wind carries them, taking no root in the earth, only striking their roots in the water, as Ducks-meat, Frog-bits, and Water-soldiers. A small quantity of earth in the bottoms of the pots or cases will be sufficient to maintain the water in a right state for the support of these.

And, indeed, the best way to understand the right method of cultivating them in gardens will be to observe the mode of growth, and the exposure of those plants that we would civilize in our gardens. For the plain road of nature should be always followed, or at least kept in view, in order to obtain healthful plants.

In thus artificially cultivating water plants, it is my opinion that those that naturally grow in rivers should be frequently refreshed with spring-water; but such as delight to grow in standing pools or ponds should be seldom interrupted with it.

It may also be observed that water plants, when they are removed, are as long before they recover themselves, to renew their growth, as land plants are. And whereas it is an usual thing to shelter land plants from the heat of the sun, after they have been transplanted, water plants must be treated quite contrary, and must be exposed to the sun after their removal.

The seeds of water plants are of two kinds, the one kind swimming on the top of the water, and the other sinking to the bottom as soon as it is shed, following the nature of their mother plants in that respect; for if the seeds of such plants, which naturally swim on the top of the water, should sink to the bottom, those seeds would not be in the proper station which is required for their growth, and so, of consequence, would perish; and so, on the other hand, the seeds of such plants which naturally grow under water, will not swim on the top of it.

It may also be observed that in our climate no one water plant is an evergreen; but all of them are either vivacious or annual, and either lose their leaves down to their roots, or entirely perish, excepting only their seeds; for it is impossible that they should live and grow in frozen waters.

Therefore, in order to preserve their seeds, that we may be supplied with the several kinds from year to year, the plants are to be followed from the flower till they are ripe, and then they should be put into earth and water, to preserve them fit for vegetation the next spring; for that is the way that nature takes, and there is no difficulty in doing this in pots, &c.

They may be put into the pots or troughs as soon as they are gathered, and may there either sink or swim, according to their nature, until the spring causes them to sprout, and they will prosper, and require but a very little attendance.

I do not doubt but that the seeds of water plants will produce as many varieties as the seeds of land plants every year.

As to exotic water plants, I am of opinion that they are best to be procured and brought hither in the seeds; and whereas, in America, the waters are generally adorned with beautiful plants, if they were procured by some ingenious correspondent in those parts, they may be put (each sort by itself) into bottles of water and earth, with large mouths, and only to be covered with a linen cloth, for if they were stopped with corks, the liquor would be apt to ferment; and these bottles might be put into a vessel of water, and so be brought to us; and when we receive them, they should be sown in the pots, as directed before, and set into hotbeds, until the weather in England comes to answer the heat of the climate they came from.

When the seeds are gathered, the person who does it should curiously observe the depth of the water they grow in, the quality of the soil under the water, the situation, and whether it is standing or running water they grow in; and, above all, the taste of the water, whether it be fresh, or salt, or brackish.

When we have made a good collection of varieties of water plants, they may be disposed into classes, and the several tribes ranged in their proper order, which would be of use to such as read lectures on plants, and for want of this is the occasion that water plants are so little known.

The most proper season for disposing and removing them is as soon as they are out of flower, and the leaves begin to decay, which is about the beginning of September. The stems or branches of them should then be cut off near the root; and their roots should be planted at due distances in the pots or troughs, as before directed.

Those water plants which come from foreign parts must be sheltered in a greenhouse during the winter; for if they, like the exotic land plants, so far preserve their natural season of growth that they will only sprout in the spring time of their native countries, they will sometimes flower with us in the winter season. And while they are in the greenhouse they should frequently be refreshed with water, somewhat warmed with the heat of horse-dung or the sun, and be allowed as much air as possible.

ON THE CULTURE OF CACTUSES.

A CORRESPONDENT requesting instructions on the culture of the Cactus, I herewith send you some practical observations, which contain the practice of the most successful exhibitors at the London shows of this tribe of plants. The compost that I use is an equal quantity of light turfy loam and pigeons' dung, and one-third sheep's dung, exposing the mixture one year to the influence of the summer's sun and winter frost to mellow. When wanted for use, I add one-third of sandy peat, in both cases mixing them well together. I grow the young plants from February to July, in the forcing flower-house, kept from 55° to 60° Fahr. I afterwards remove them to a shelf in an airy situation in the greenhouse, exposed to the midday sun, giving them plenty of air and little water. The plants that I want to flower the following September are placed in the forcing-house the first week in December, giving them very little water for the first ten days, and gradually increasing the water as the plants advance in growth. About the 1st of February I stop all the young shoots, which soon become well ripened; from this time I decrease the quantity of water until they become quite dry, in order to throw the plants into a state of rest. In the beginning of March I replace them in a cold shady situation in the greenhouse, treating them as before. For plants to flower in August, I place a quantity more in the forcing-house the first week in January, treating them the same as those for September, only they are put to rest in the greenhouse a fortnight later, and replaced in the forcing-house one week sooner. The first flowering plants are put in the forcing-house the end of January, and will come in flower about the middle of March. When these plants have done flowering, and are removed from the drawing-room or greenhouse, I prune out most of the old shoots that have flowered, so that the plants are furnished regularly with young shoots for flowering the ensuing year; these plants are also placed in the forcing-house for ten days, to ripen the young wood and dry up the moisture, and are then put to rest in the greenhouse as usual: such plants will flower a second time in October. Others, put in the forcing-house the middle of February, will flower about the end of April; if then pruned and dried, and put to rest as before, they will flower a second time in November, and so on in proportion. I re-pot them at all seasons, whenever the plants may require it, always observing to keep the pots well drained with potsherds, that the moisture may pass off readily. This process may be considered troublesome, but superior growth, and abundance of flowers, amply repay the care bestowed. By the above treatment, C. speciosa and Jenkinsoni have generally produced from ninety to a hundred fine expanded flowers at one year old. I prefer growing them in wooden tubs, with nice stakes fixed in the tub, to the usual mode of supporting them by sticks driven into the ball of the plant, which I consider injures the fibre and makes the plant appear unsightly.

COLOURING MATTER FOR PLANTS.

The colouring matter for plants called chromule is contained in cells protected by the epidermis, or thin transparent covering of the surface, which, by its transparency, permits the colour to be transmitted. It is chemically composed of carbon, in large quantities, hydrogen, and a small proportion of oxygen; it is found in the leaves of plants, and proceeds from the carbon fixed by the decomposition of carbonic acid; its colour in this situation is green, and as such it may be considered as carbon, presented by the vegetable kingdom in its least degree of combination with oxygen. Many leaves change their colour at the approach of winter, and frequently assume a bright red appearance (as is the case with the Virginian creeper), a circumstance caused by their having ceased to fix carbon during the day, but continuing to absorb oxygen at night. This condition, then, may be assumed as carbon, or chromule, in its least amount in quantity, under its highest state of oxygenation, and is most frequently met with in flowers whose functions (the reverse of that of leaves) is to part with carbon, whilst they absorb oxygen. We have in these examples the colouring principle of plants (carbon) presented under its two most opposed conditions, namely, in an abundant quantity, and little oxydised, assuming a dark green colour, whilst, in the opposite state, there exists only a small proportion, but at the same time it is exhibited in its highest degree of oxygenation, appearing as a bright red.—*Medical Times.*

FLORAL EXHIBITIONS.

ROYAL HORTICULTURAL SOCIETY, REGENT-STREET.

July 4.—Of subjects of exhibition, Messrs. Veitch and Son sent a Peruvian Thibaudia, a pretty Vaccinium-like shrub, with long, waxy, rosy-pink, tubular blossoms, tipped with white; and a pale yellow Mexican Lisianthus named frigidus, for which a Certificate was awarded.

From Mr. Glendinning, of the Chiswick Nursery, was a specimen of the new Allamanda Schottii, a handsome Brazilian species, perhaps more shrubby than A. cathartica, and with flowers of a glowing yellow, larger than those of the large flowered variety of that species. Besides the size and copiousness of the blossoms, this fine species is stated to have the merit of flowering in a small state. A Banksian Medal was awarded it.

Messrs. Loddiges, of Hackney, exhibited a collection of Orchids, consisting of Aerides affine and three other species; the larger flowered variety of the orange-scarlet blossomed Epidendrum vitellinum; a good Brassia brachiata; the white-lipped Oncid (O. leucochilum), one of the best of its class; the Mexican Stanhopea Martiana, a beautiful species; Dendrobium sanguinolentum, Odontoglossum cordatum, Oncidium bifolium, Cattleya citrina, and some others. A Banksian Medal was awarded for the five first-mentioned plants.

A similar award was made to Mr. Henderson, of Wellington Nursery, St. John's Wood, for a collection of Pelargoniums, Cape and fancy varieties. Of the Cape species which were named the most beautiful were, ardens, bipinnatifidum, and flexuosum; some others, to which numbers only were attached, were also very pretty, exhibiting in a striking degree the charm of which the better formed and more showy varieties of the florist are in a great measure deficient, viz., variety. The same nurseryman also showed a Phlox named depressa, a hybrid obtained between P. Brownii and Drummondii. Blooms of Hoyle's Scipio Pelargonium came from Mr. Silverlock. Mr. Keynes, of Salisbury, showed a light-flowered Fuchsia named Snowdrop. A Certificate of Merit was awarded to Mr. Moore, gardener to the Earl of Auckland, for a well-flowered plant of a sweet-scented Amaryllis, named Natalensis, if not the same, much resembling A. Forbesii, a species introduced by the Horticultural Society some twenty years ago. As an instance of the good effects of dry cool winter treatment for such things, it was mentioned that of two bulbs, perfectly sound and of equal size, received in July, 1846, the one exhibited was kept dry and cool till the following spring; the other was potted immediately, and grew before winter, very weakly, however, and it was stated that it still remains in a sickly state, the bulb feeling soft. The other, wintered dry, was placed in a vinery at work. It grew vigorously, but did not blossom in 1847; it was kept growing till July, when it was gradually dried off, and kept for the remainder of the summer on a shelf near the glass; it was wintered dry and cold, and was again placed in spring in a vinery at work, and when it had grown to some size it was watered with weak liquid manure; it began to show for blossom about the middle of June, and has flowered beautifully. A variegated variety of Thunbergia aurantiaca, named Doddsii, was shown by Mr. Dodds, gardener to Colonel Baker.

From the garden of the Society were Mr. Fortune's double-flowered Convolvulus (Calystegia pubescens), which, though hardy, makes a pretty greenhouse twiner; Indigofera decora, also a Chinese plant, remarkable for the length of time it continues in flower; the useful Roella ciliata; Mr. Lobb's Æschynanthus (Æ. Lobbianus); Gardenia Rothmanni; and a large specimen of the New Zealand Veronica speciosa, just coming into flower. The latter, which requires protection in winter about London, has been found to be perfectly hardy in Cornwall. From the same collection were also Salvia hians, a pretty hardy, herbaceous, blue and white-flowered perennial from Cashmere; Fuchsia tetradactyla, a slender-growing species, of no beauty, so named from its deeply-cleft stigma, which, when stripped of its tiny envelopes, looks not unlike the foot of some gallinaceous bird; Monardella undulata, a sweet-scented hardy annual, raised from seeds sent from California by Mr. Hartweg; Adamia versicolor, and other plants. The Adamia, which is one of Mr. Fortune's Chinese introductions, is a greenhouse plant, and looks not unlike a Hydrangea, so far as the foliage is concerned, but the flowers are different. When in bud, they are at first white, but gradually change to pink; and, when fully expanded, the interior is a violet blue. The flowers should be succeeded by little berries of a fine blue colour, which are as pretty as the flowers; but attempts to fruit it have hitherto failed.

ROYAL HORTICULTURAL SOCIETY, CHISWICK.

The Horticultural Society's third exhibition for this season took place on Wednesday, July 12th, in the Gardens at Chiswick, and was visited by 14,084 persons.

The collections of plants in pots were generally those which had been exhibited at the previous shows, which we have noticed in our June and July Numbers, and, therefore, now omit them. At this show the Carnations and Picotees are exhibited; and in order that our readers may see which varieties are most successful, and thus be a guide to them in making a selection of the most approved, we insert the three first prize stands in each class.

CARNATIONS AND PICOTEES.—Some fine stands of these favourite flowers were exhibited, and excited much admiration from the company.

For CARNATIONS, in pans of twenty-four distinct varieties.—First prize, in the *Amateurs' Class*, was awarded to Mr. J. Edwards, Wace Cottage, Holloway, for Flora's Garland, Mansley's Beauty of Woodhouse, Hale's Prince Albert, May's Hotspur, Duke of Sutherland, Village Maid, Miss Thornton, Count Paulina, Earl of Leicester, Strong's Duke of York, La Bailbulaise, Sir H. Hardinge, Lady of the Lake, Thiers, True Briton, Ward's Sarah Payne, Isonia, President, Hugo Meynell, Sir R. Peel, Sylvius, Orlando, Earl Spencer, and Puxley's Prince Albert.

Second prize, Mr. Newhall, of Woolwich, for Halliday's Lord Rancliffe, Ely's Mrs. Bunkill, Willmer's Hero of Middlesex, Ely's Sir Hugh Gough, Hodge's Bright Phœbus, Flora's Garland, Count Paulina, Mansley's Beauty of Woodhouse, Jacques's Georgiana, Ely's King of Scarlets, Appleby's Prince of Wales, May's Orlando, Puxley's Prince Albert, May's Ariel, Ely's Duke of Bedford, May's Hotspur, Simpson's Queen Victoria, Eason's Admiral Curzon, Holmes's Mary Ann, Scaley's Purple, Chamber's Kate, Scaley's Princess Royal, Ely's Lord Milton, and May's Hotspur.

Third prize, to Mr. Ellis, Woolwich.

In the same class for *Nurserymen*, first prize to Mr. Turner, of Chalvey, for Flora's Garland, Eason's Admiral Curzon, Puxley's Prince Albert, Turner's William Penn, Count Paulina, May's Prince Arthur, Martin's President, Greasley's Village Maid, May's Ariel, Standard, Earl Spencer, Colcut's Brutus, May's Cardinal Wolsey, Hale's Prince Albert, Squire Trow, Duke of York, Hale's Sir H. Smith, May's Lorenzo, Beauty of Woodhouse, Arabella, Ibrahim Pacha, Ely's King of Scarlets, Ward's Sarah Payne, and Ely's Margo.

Second prize, Messrs. Norman, of Woolwich, for Willmer's Conquering Hero, Wilson's Harriet, Hepworth's Hamlet, Jackson's Squire Trow, Wood's William the Fourth, Willmer's Hero of Middlesex, Burroughes's Earl Spencer, Hale's Prince Albert, Flora's Garland, Squire's Defiance, Beauty of Woodhouse, Halliday's Lord Rancliffe, Ely's Duke of Bedford, Holmes's Count Paulina, Milwood's Premier, Ely's Lord Hardinge, Whales's Chance, Willmer's Telemachus, Admiral Curzon, King of Scarlets, Puxley's Prince Albert, Barrenger's Premier, Ely's Sir R. Hill.

Third prize, Mr. Ward, who showed Cartwright's Rainbow, May's Ariel, Ward's Sarah Payne, Smith's Wellington, Hepworth's Hamlet, Wilmer's Duchess of Kent, Hale's Prince Albert, Ely's Lord Milton, Flora's Garland, Turner's William Penn, Wilson's Harriet, Don John, Colcut's Brutus, Bright's Phœbus, Puxley's Queen, Lodge's True Briton, Parker's Sophia, Squire's Defiance, Mansley's Beauty of Woodhouse, Ely's King of Scarlets, Elliott's Martha, Count Paulina, Strong's Duke of York, Ward's No. 3.

In PICOTEES, the first prize was awarded to Mr. Edwards, Holloway, for the following twenty-four varieties: Lee's Privateer, Sharp's L'Elegant, Wildman's Isabella, Ely's favourite, Brinkler's Lady Chesterfield, Emma, Princess Alice, May's Sebastian, Matthews' Ne Plus Ultra, Gidden's Teaser, Willmer's Princess Royal, Burroughes' Mrs. Bevan, Wood's Queen Victoria, Matthews' Enchantress, Edmonds' Jenny Lind, Costar's Triumph, May's Portia, Yorkshire Hero, May's Jessica, Lady Alice Peel, Mrs. Barnard, May's Olivia, Edmonds' Ernest, and Jessop's Sir W. Middleton.

Second prize, Mr. J. W. Newhall, for Mrs. Bevan, Matthews' Enchantress, Barraud's Borderer, Wildman's Isabella, Mrs. Barnard, Kirtland's Augusta, Crask's Queen Victoria, Sharpe's L'Elegant, May's Portia, Cox's Regina, Nulli Secundus, May's Sebastian, Edmonds' Jenny Lind, Willmer's Princess Royal, Burroughes' Duke of Newcastle, Gidden's Teaser, Youell's Gem, Lord Hardinge, Norman's Beauty, Tolworthy's Isabella, Headley's King James and Venus, Vespasian, and Wilson's Fanny Irby.

Third prize, to Mr. Ellis, of Woolwich, for Gidden's Diana, Wain's Queen Victoria, Burroughes' Lady Douro, Headley's Venus, Garret's Lady Dacre, Headley's King James, Vespasian, Hector, Burroughes' Mrs. Bevan, Wilson's Fanny Irby, Wildman's Isabella, Mrs. Barnard, Crask's Prince Albert, Lady Alice Peel, Burroughes' President, Willmer's Agnes, Anacreon, Seedling, Matthew's Enchantress, Sir W. Middleton, Ophelia, Seedling, Brinkler's Hope, and Miss Desborough.

In the *Nurserymen's Class*, the first prize was awarded to Messrs. Norman, of Woolwich, for Burroughes' Duke of Newcastle, Matthews' Enchantress, Burroughes' President, Cox's Regina, Prinnet's Bendigo, Burroughes' Margiana, Wildman's Isabella, Wain's Queen Victoria, Headley's Generalissimo, Sharp's L'Elegant, Burroughes' Amy, Willmer's Princess Royal, May's Juliet, Burroughes' Ajax, Mrs. Barnard, Headley's King James, Burroughes' Lady Smith and Mrs. Bevan, Crask's Queen Victoria, Headley's Venus, and Burroughes' General Jackson.

Second prize, to Mr. Turner, Chalvey, for May's Rosalind, Marris' Prince Albert and Celia, Edmond's Jenny Lind, Regina, May's Jessica, Halliday's Minerva, Lee's Privateer, May's Portia, Mrs. Bevan, Crask's Prince Albert, Venus, May's Sebastian, Ne Plus Ultra, Hermione, May's Juliet, Costar's Richard Cobden, May's Olivia, Burroughes' Amy, Turner's Ernestine, Wildman's Isabella, Lady Dacre, Burroughes' Miss Burdett Coutts, and Mrs. Barnard.

Third prize, to Mr. Ward, Woolwich, for Mrs. Barnard, Burroughes' President, Belle of the Village, Gidden's Diana, Crask's Queen, Crask's Prince Albert, Hardstone's Sarah, Wildman's Isabella, Lady Dacre, Wilson's Fanny Irby, John's Prince Albert, Sir W. Middleton, Smith's Lord Hardinge, Matthews' Enchantress, Ward's No. 3, Mrs.

Bevan, Burroughes' Lady A. Peel, Willmer's Bride, Princess Augusta, Miss Desborough, Brinkler's Purple Perfection, Beauty of Cray, and Barraud's Bride.

ROYAL SOUTH LONDON FLORICULTURAL SOCIETY.

July 18.—The fourth show of the season took place in the Surrey Zoological Gardens on Tuesday last, under favourable circumstances, the day being fine and the company numerous. As nearly all the plants brought forward have been mentioned in our reports of Chiswick and other exhibitions, we shall not redescribe them, but will confine our remarks to the florists' flowers, which form the chief source of attraction here, and which were on this occasion produced in excellent condition; and as it was the usual Carnation and Picotee show, we shall give little else at present.

For the best twelve CARNATIONS in the *Amateurs' Class*, the first prize was awarded to Mr. May, of Sonning, whose stand contained Prince Arthur, Mercutio, May's Caliban, Turner's William Penn, Marquis of Lansdowne, King Lear, May's Lorenzo, Shallow, Flora's Garland, Romeo, Beauty of Woodhouse, and Edmund.

Second prize, Mr. Newhall, of Woolwich, for Hale's Prince Albert, Puxley's Prince Albert, Flora's Garland, Jacques's Georgiana, Hodge's Bright Phœbus, May's Ariel, Brabbin's Squire Meynell, Simpson's Queen Victoria, Hepworth's Hamlet, Ely's Lord Milton, Appleby's Prince of Wales, and Norman's Duke of Wellington.

Third prize, Mr. Headley, for Ely's Lady Ely, Hugo Meynell, Appleby's Prince of Wales, Unknown, Ely's Prince of Wales, Wood's William the Fourth, Wakefield's Paul Pry, Headley's Royal Chancellor, Duke of Sutherland, Ely's Lord Milton, Holmes's Count Pauline, and Mrs. Alney.

Fourth prize, Mr. J. Reeves, for Flora's Garland, Roi du Capucins, Colcut's Brutus, Young's Double X, Tomlyn's Briseis, Park's Syren, Grenadier, Jacques's Georgiana, Sharp's Defiance, Iron's Conqueror, Pollard's First-rate, King Alfred.

Fifth prize, Mr. J. Edwards, Holloway.

In the same class for *Nurserymen*, the first prize was awarded to Mr. Keynes, of Salisbury, for Mansley's Beauty of Woodhouse, Young's Double X, Ely's Duke of Bedford, Flora's Garland, Ely's King of Scarlets, Hale's Prince Albert, Hepworth's Hamlet, Ely's Lord Hardinge, Cyclops, Ely's Prince of Wales, and Eason's Admiral Curzon.

Second prize, Mr. Norman, of Woolwich, who showed Ely's Lord Hardinge, Headley's Royal Chancellor, Hepworth's Antagonist, Williams's Earl of Errol, Ward's Sarah Payne, Hale's Prince Albert, Flora's Garland, Puxley's Prince Albert, Ely's King of Scarlets, Ely's Lovely Ann, Cartwright's Rainbow, and Headley's Achilles.

Third prize, Mr. Turner, of Chalvey, for Hepworth's Hamlet, Brooks's Flora's Garland, Roi du Capucins, Barnard's Duke of Roxburgh, May's Ariel, Ely's Lord Hardinge, Puxley's Princess Royal, Mansley's Beauty of Woodhouse, Young's Seedling, Ely's Lord Morpeth, Wilson's Harriet, and Addenbrook's Lydia.

PICOTEES.—In the *Amateurs' Class* the first prize was awarded to

Mr. Newhall, of Woolwich, whose stand contained the following varieties:—Headley's Venus, Halliday's Delicata, Mrs. Barnard, Wildman's Isabella, Burroughes's Amy, Youell's Gem, Headley's King James, Edmonds's Jenny Lind, Cox's Regina, Burroughes's Fairy Queen, Giddens's Queen Victoria, and Sharp's L'Elegant.

Second prize, J. Pond, Esq., for Seedling, Mrs. Bevan, Cole's Mrs. Tendall, Seedling, Wain's Queen Victoria, Burroughes's Amy, Headley's Venus, Matthews's Enchantress, Edmonds's Jenny Lind, Seedling, Wildman's Isabella, and Mrs. Barnard.

Third prize, Mr. Perkins, who showed Willmer's Princess Royal, Dickson's Charles Stanford, Trahar's Rosalind, Dickson's Mrs. Trahar, Victoria Regina, Mrs. Barnard, Wildman's Isabella, Burroughes's Amy, Sharp's Duke of Wellington, Edmonds's Jenny Lind, Sharp's L'Elegant, and Willmer's Princess Royal.

Fourth prize, Mr. Sandilands.

In the *Nurserymen's Class* the first class was awarded to Mr. Turner, of Chalvey, for Marris's Prince Albert, Burroughes's Amy, Green's Queen, Delicata, May's Juliet, Willmer's Princess Royal, Edmonds's Ernest, Headley's Venus, Wildman's Isabella, Mrs. Barnard, May's Portia, and Edmonds's Jenny Lind.

Second prize, Messrs. Norman, Woolwich, for Headley's Captivation, Seedling, Mrs. Barnard, Sharp's L'Elegant, Burroughes's Amy, Willmer's Princess Royal, Headley's Ariel, Edmonds's Jenny Lind, Headley's King James, Youell's Gem, Headley's Venus, and Regina.

SEEDLING FLORISTS' FLOWERS.—A Certificate to William Sandilands, Esq., for a light purple-edged Picotee, named Eliza, a first-rate variety. This flower will become, in our opinion. as great a favourite as Mrs. Barnard, with a different coloured edge; it has the same breadth of petal, and rather more substance, with the most clearly-defined edge we ever saw. The above-named gentleman also exhibited several other seedlings that were greatly and deservedly admired; they promise equally well; we hope to see them again.

A Certificate to the Rev. A. Matthews for a seedling, named Witch, a light purple edge, similar to Matthews's Enchantress, but scarcely sufficiently distinct to exhibit in the same stand.

A Certificate to Mr. Wood, of Huntingdon, for a crimson Bizarre Carnation, No. 1. It appears a very high-coloured flower, and has several first-rate properties. The above was selected from twenty-four blooms, four of which were entered, inclusive of the one awarded a certificate. We think there were several of Mr. Wood's seedlings that promised well; but we cannot take upon ourselves to canvass their merits, as they were not sufficiently in character.

A Certificate to Mr. May, of Sonning, for a seedling rose-flake Carnation, named Romeo, similar in character to Brooks's Flora's Garland, but no improvement on that variety.

The collections of the above lovely flowers were exceedingly numerous, and generally superb in character, exhibiting, too, much improvement in their cultivation. They were greatly admired by a crowd of inspectors. Very great praise is due to the florists, both in town and country, for their successful exertions in contributing so very extensively.

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

ALL kinds of Roses (excepting the China and its varieties) may now be budded. Leave a small portion of wood with every bud, or, this dry season especially, the buds will shrivel, without much attention both to watering at the roots, moistening the bud by sprinkling water over it, shading the same, &c. Securing the bud with worsted is better than matting. The following mode has been adopted with very great success: "The bud for insertion is taken off the shoot very close to the eye; the tip or part of the bark below the bud is cut off quite close, to allow the bud to be pushed closer into the stock without being bruised. It then requires only to be tied above the bud, and a composition applied to exclude the air and keep the bud cool, consisting of two-thirds cow-dung and one-third stiff loam. The bud requires no untying, and gradually grows so closely into the stock as hardly to be distinguished from a shoot, and is not so likely to be blown out or injured. The composition is applied in a liquid state." Chrysanthemums should have the leads pinched off, in order to induce laterals to push, so the plants may be dwarfer, and have bushy heads; this must be done as early as possible. Propagate by means of slips, parting of the plants, &c., any double flowered, and other desirable fibrous rooted perennial plants done flowering. Cut off the stems of Double Rockets, in order to induce them to push forth side shoots, which will furnish plants for dividing. Transplant into nursery beds, or into borders, seedling perennial or biennial plants sown in spring. Seeds of all kinds of bulbous-rooted and tuberous-rooted plants should be sown in pans or boxes, such as Cyclamens, Anemonies, Ranunculuses, Hyacinths, &c. Take up any bulbs of Ranunculuses, &c., remaining in the beds whose foliage is decayed. Plant out, too, any autumn flowering bulbs. Auriculas and Polyanthuses should be cleared of their dead leaves, have offsets taken off, and the plants be re-potted; also pot off seedlings. Heartsease should be increased, putting them in a shady border. Verbenas should be increased by putting off cuttings, potting runners, &c., so that they may be well established before the winter season commences. The plants in beds, borders, &c., will require a good watering at the roots with soft pond-water twice or three times a-week, if the season continues dry; so with most other bedded plants, as Scarlet Pelargoniums, &c. Seeds of Pansies, and any of the early-blooming annuals, should be gathered as soon as they appear mature; the Pansy should be gathered before the husk breaks, or the seeds will suddenly be widely scattered. Pinks already planted out in beds should be watered, shaded, &c.; beds of them may still be made. See articles in former numbers. Layers of Carnations and Picotees, when well rooted, should be potted off. The bulbs of Tulips should have the loose coats dressed off. Wallflower slips should be put off early. Where there is abundance of suitable short shoots of the plants employed for beds, as Geraniums, Heliotropes, Calceolarias, Anagallis, Double Ragwort, Salvias, Hemimeris, Bouvardias, &c., they should be put off and struck, after which they can be kept in a coolish situation, till the usual period of winter protection. Thus early prepared, it is done with less attention, and, the plants being well rooted, endure the winter better. Dahlias must have the laterals thinned out, so that the principal stems stand free. When flowers are required large in proportion, thin away the buds, water abundantly, mulch over the roots, &c. What is termed the Black Aphis fly has attacked the Dahlia this season most ravenously. The best remedy is to brush them off daily, and water over the tops in the evening. If the shoots be bent into a strong infusion of chamomile water, we find it so embitters the tender foliage, that the insects do not attack them afterwards. Sow Mignonette for blooming in winter; and seeds of Brachycome iberidifolia now sown, and the plants potted singly in small 60's, will survive through winter, protected from frost, and be highly ornamental for the greenhouse, sitting-room, &c., the next year.

IN THE GREENHOUSE, STOVE, &c.

Pelargoniums.—Plants that have done blooming, and the young wood has been a little hardened by a free admission of air, should now be headed down, if intended for the next season's blooming. Being now headed down, they soon push fresh shoots; and as there generally are many more than are necessary to retain for the proper formation of the plants, they should be thinned when about an inch long. When the shoots retained are about two inches long, repot the plants by shaking off nearly all the old compost, and then replace with new. These plants form the finest specimens for exhibition, &c., the following year. (See excellent articles on the entire culture, by Mr. Cock, Mr. Catleugh, and other celebrated growers, in former volumes of our Magazine.) As early as possible put off cuttings to strike for a supply of young plants for next year.

Camellias may now be repotted; I consider it an excellent plan. Perform this operation the moment that the flower-bud is decidedly formed. As compost, I would recommend two-thirds of fibrous loam of an unctuous character, and one-third of fibrous heath soil. The more fibrous and lumpy it is the better, and a good sprinkling of charcoal in small masses, with sharp silver sand, should be added. Let the pots be most completely drained, by placing some large crocks in a very hollow position at the bottom; topping these up with a pounded mixture of broken crocks and charcoal, from which all the very small particles have been riddled. Cover this with very fibrous turf in small lumps before placing the ball, and keep pressing the material (not ramming) close with the fingers during the process of filling up, observing to have the compost in a mellow state, rather inclining to dryness. One most material point is, to see that the ball is thoroughly moistened before shifting; if any doubt of this exist, let the ball be steeped in water for a quarter of an hour previous to potting. When the flower-buds are in clusters thin them, so as to leave no more than are likely to be perfected. If too many remain they injure the plant, and eventually drop off in spring.

Calceolarias that have .done blooming should have the stems cut down; then place the plants in a cool frame, and shade from hot sun. In about ten days re-pot them. (See Article in July Number, 1846.)

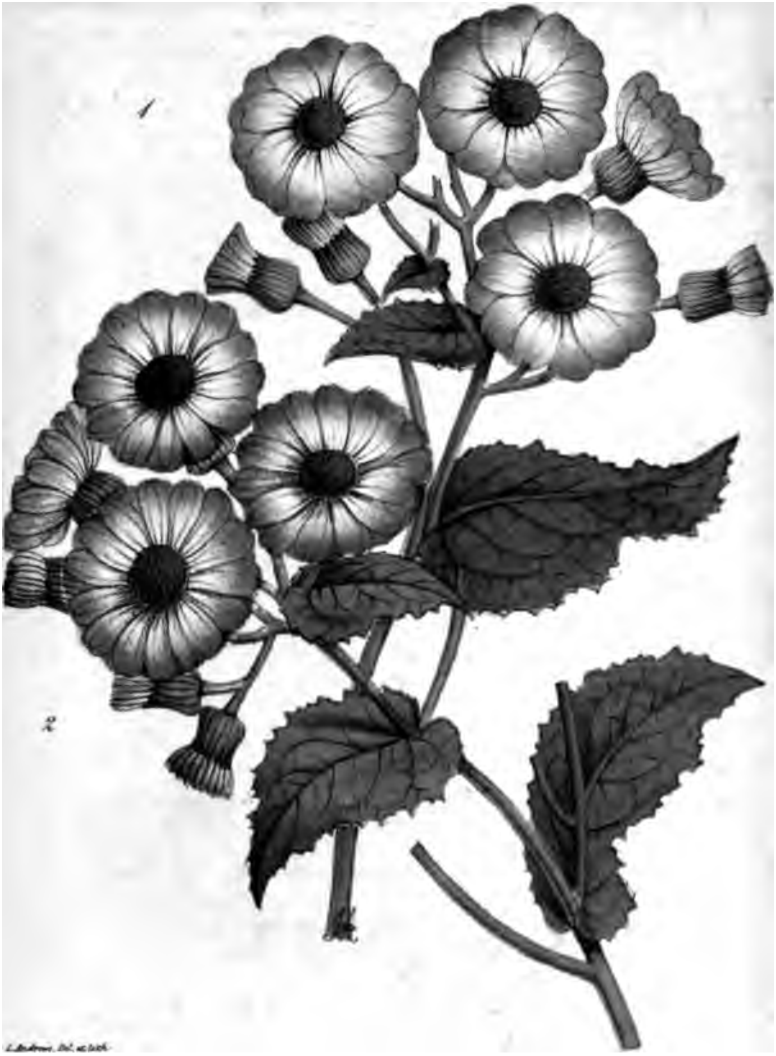
The very hot and dry weather will be favourable for the Red Spider upon many of the New Holland plants, as Chorozemas, &c., also Thunbergias, &c.: to prevent them, occasionally place the plant so as it can be forcibly syringed at the under side of the leaves, and if strong soapsuds are used the better, as such a composition leaves a glutinous matter. If a plant be infested, syringe it, and whilst wet turn it over and dust it under the leaves with common sulphur. A good syringing of the plants three times a-week is highly beneficial to the entire stock, avoiding the flowers, and performing it at the evening. Well water the ground where the plants stand, that is, between the pots.

Leschenaultias, Pimeleas, Baronias, Polygalas, and similar plants, done blooming, should now be cut, in order to have the plants brought into a proper bushy form; after which place them in a situation where they can be shaded from hot sun, to cause them to push fresh shoots. If young stock be required of any kinds of greenhouse plants, and there be young wood sufficiently ripened, cuttings should immediately be inserted, as the season is getting to a close for success this year. Re-pot specimen plants of the above-named kinds as early as possible after they begin to push: this prepares for next season's success.

Cinerarias required for blooming in autumn and the early part of winter should be immediately potted and duly forwarded.

ROSE INSECTS.

I HAVE long kept my Rose trees quite clear of green fly and other spring vermin by using a mixture, which was communicated to my employer by Mr. Paul, of Cheshunt. The recipe is this:—To twelve gallons of cold water add one bushel of soot and about half a peck of unslacked lime; stir and mix. Let the mixture stand for twenty-four hours. The soot will have come to the surface; skim it off. It may be afterwards used several times. Syringe the Roses from a hand syringe or a garden engine. But although this mixture is perfectly efficient during the spring, yet about this time of the year an enemy appears on whom it has no effect. This is a small white grub with a scaly brown head, the scales of which are of a surprising hardness and strength. It destroys the fleshy part of the leaves, leaving them skeletons of fibres not unlike fine lace—seriously injuring the health and strength of the plants. I have till lately been quite unable to get rid of this pest by any other method than the laborious one of picking them off by hand, which in large collections is all but impracticable. The lime and soot mixture, tobacco-water, snuff, sulphur, I have all tried in vain. I find, however, that by adding one pound of soft soap to the twelve gallons of lime and soot water this grub is quickly destroyed. The soft soap should be dissolved in warm water before it is added to the other ingredients.—*Wm. Corvell, Haileybury, Hertford.*—*Gardeners' Chronicle.*



L. Andrews Del. et lith.

No. 1 Madle. Cerito _ No. 2 Climax.

SEPTEMBER, 1848.

ILLUSTRATIONS.

CINERARIAS.

1. Madame Cerito. 2. Climax.

THESE very beautiful varieties have been raised, with many other fine ones, in the floral establishment of Mr. A. Henderson, of Wellington-road, London, and who will most probably offer them for sale next spring.

The Cineraria is now become a popular flower, and forms a class for competition at the principal floral exhibitions in London, and at the earliest shows this season there were numerous splendid specimens shown. We very carefully took descriptive notes of the best presented on those occasions, as well as at the establishments noted for this pretty tribe.

These lovely flowers are now to be had of almost every shade of colour, and their gay and lively appearance at an early period of the season, render it peculiarly useful for purposes of general decoration in the greenhouse, sitting room, &c. To the great improvement, however, which has been effected, within the last two or three years, upon its original starry-shaped flowers, remarkable mostly for their daisy-like eye, surrounded by a few narrow petals, the increase of colours, and the compact form of growth, may we attribute its present elevation.

The two now figured afford ample proof in form, growth, &c., of the improvements we speak of. One particular is peculiar to the seedlings of Mr. A. Henderson, viz., a *dwarf, compact* growth. This gives to them an uniformity which is admirable. The dwarf, compact growth of the plant most materially contributes to its perfection. The other essentials are, that the trusses of bloom be large, close, and even on the surface; the individual flowers stand together so that their edges just touch each other, however numerous they may be; and, finally, as the most beautiful of all forms in a flower that faces us, each separate bloom should form as complete a circle as possible, its centre or disk be proportionate to its size, that is, in all cases not more than one-third the diameter of the whole, and if somewhat less, perhaps the better, as this portion of the flower is certainly the least interesting of any. We hope soon to see *double-flowered* kinds, which will be pleasingly admitted to obviate the last-named consideration.

A very excellent plan to adopt in the cultivation of this plant is to turn out the old plants (after undergoing a thorough cleansing process) into a raised bed, in the month of June. The bed should be composed of one-half leaf-soil, or other vegetable matter, with sharp sand; and if soiled up pretty close to the stem, abundance of fine young plants will be ready for pots by the early part of August: they should then be taken up, shaken entirely apart, and the plants singled out for general potting. The soil should be equal parts of leaf-mould, peat, old cow-dung, charcoal, or wood-ashes, strong loam, and sharp sand; remembering in all these matters to drain the pots completely.

Nothing is then necessary but to place them all behind a wall, on the north side, immediately they are potted, and to sprinkle them well. About the middle of September they will require their final shifting into larger pots, using the same kind of soil in a rougher state. The plants may then be placed in a cold pit, near the glass, as they like abundance of light; they should be watered moderately, and removed to the greenhouse or sitting room when required for bloom.

In addition to the varieties now figured, the following were the best we saw exhibited during the past season, and any of them may be procured at reasonable prices.

ISABELLA (Henderson's).—Disk (centre) dark, around which is a creamy-white circle, and the exterior broad margin (which is deemed the ground clour) a rich violet colour. Flower an inch and a half across.

COUNTESS OF ZETLAND.—Disk dark, with a rich purplish-crimson ground colour. Flower one inch across.

BRILLIANT.—Disk dark, with a bright purple ground colour. Flower one inch across.

ATTRACTION.—Disk dark, with a bright crimson ground colour. Flower one inch and a quarter across.

ANAIS.—Disk buff colour, around which is a circle of white, and then a broad margin, ground colour of bright pink. Flower one inch across.

MAID OF ARTOIS.—Disk dark, spangled with golden anthers, around which is a reddish circle, and the ground colour (margin) a rich blue. Flower one inch across.

PRIME MINISTER.—Disk very dark, around it a white circle with a broad ground colour of bright rose. Flower one inch and a half across.

CONQUEROR (Ivery's).—Disk cream coloured, with fine blue petals. Flower one inch across.

BEAUTY OF WANHAM.—Disk violet colour, surrounded with a broad white circle, and a ground colour of violet margin. The petals are too narrow, but it is a very interesting, showy variety. Flower one inch broad.

Colossus.—Disk nearly white, with bright violet petals. Flower one inch across.

Bicolor.—Disk green and white, with bright rosy-purple petals. Very neat.

Maritima.—Disk very dark, surrounded with a pure white circle, and the ground coloured margin a rich purple. The petals are too narrow, but the contrast of the very dark disk and white circle have a very pretty effect.

Duchess of Sutherland.—Disk very dark, surrounded with a white circle, and the ground coloured margin is a pretty violet.

One in the Ring.—Disk dark, surrounded with a white circle, and the ground colour a broad margin of rich purple.

Giantess.—Disk dark, surrounded with a narrow whitish circle, and the ground coloured margin a pretty lavender. Flower nearly two inches across. Very showy.

Goodii.—A rich deep crimson. Very showy. Flower an inch and a half across.

Standard.—A very fine bright blue. Flower one inch across. Very showy.

Newington Beauty.—Disk very dark, with a pure white circle around it, and a ground coloured margin of violet. Flower one inch and a quarter across.

Blue Queen.—Disk green, surrounded with a reddish circle, and a ground coloured margin of blue. Flower one inch across.

All the above varieties are well deserving a place in any collection of these charming flowers. We have notes of many other seedlings of merit, but not being named as yet we omit giving their descriptive properties till they are. But any of our readers making a collection from what we have now given, will find them to be of an excellent character.

NOTES ON NEW OR RARE PLANTS.

BATSCHIA CANESCENS—DOWNY INDIAN PUCCOON.

This pretty flowering herbaceous perennial plant is a native of North America, quite hardy, grows to half a yard or two feet high, and blooms very freely. It is cultivated in the collection of Edward Leeds, Esq., of St. Ann's, Manchester. The flowers are produced in short terminal racemes; they are somewhat bell-shaped, sportish in what is termed the tube, and half an inch across the five-parted mouth. They are a deep rich golden orange colour. It is a very neat, handsome plant for the flower garden, and deserves to be in every collection. (Figured in *Pax. Mag. Bot.*)

BURTONIA PULCHELLA—BEAUTIFUL BURTONIA.

Leguminosæ. Decandria Monogynia.

This is a graceful shrubby plant, growing two feet high, branching with heath-like foliage. It has been received by Messrs. Lucombe, Pince, and Co., from the Swan River colony. The pea-shaped flowers are produced in profusion, in large thick spike-like terminating heads. The upper portion (vexillum) is flat, of a rich purple colour, with a rich yellow spot at the base. The keel is of a fine crimson. It blooms during the greater part of the spring and summer, and is one of the prettiest plants for the greenhouse. (Figured in *Bot. Mag.*, 4392.)

CANTUA DEPENDENS—DROOPING-FLOWERED CANTUA.

Polemoniaceæ.

This is a handsome branching shrub, growing from five to six feet high. The leaves are small, and somewhat fascicled; they vary much in figure, being either oblong or obovate, and either acutish or blunt, narrowed to the base, sometimes quite entire, and at other times with a few large deep teeth on the margin. The flowers are drooping, and grow in terminal few-flowered, rather loose corymbs; they are tubular, as much as two inches and a half in length, and nearly as much across the face of the spreading limb, which is formed of five roundish lobes; the colour is light carmine, with a tint of rose. The leaves and wood, when bruised, afford a yellow colour, suitable for dying; and the flowers are said to be used by the Peruvians for the decoration of their temples; by them the plant is called Cocantu. It is the Cantua tomentosa of Cavanilles; C. buxifolia of Lamarck; and Periphragmos dependens of Ruiz and Pavon. Native of the Peruvian Andes, near Huamantanga, and of Bolivia, whence Messrs. Veitch have recently obtained it. It will probably prove a free flowering plant.

CYMBIDIUM EBURNEUM—IVORY CYMBID.

Orchidaceæ. Gynandria Monandria.

This beautiful species has recently flowered in the collection of Messrs. Loddiges', of Hackney. It was obtained from the East Indies. The flowers are borne in racemes, two in each. A separate flower is five inches across, of a pure delicate white, excepting a yellow stripe along the centre of the lip, which, being fleshy and shining, resembles ivory. It diffuses a very agreeable fragrance. (Figured in *Pax. Mag. Bot.*)

EPISCIA BICOLOR—TWO-COLOURED.

Gesneriaceæ. Didynamia Gymnospermia.

It was sent to the Royal Gardens of Kew by the collector, Mr. Purdie, from New Grenada. It is a dwarf Gesneriaceous perennial herbaceous plant. The flower-stems are erect, or slightly inclined, about three inches high. The tube part of the flower is white, about half an inch long. The limb (face) is five-parted, an inch across, white with a broad purple margin. It blooms very freely in the plant-stove, having the appearance of a dwarf Gloxinia. (Figured in *Bot. Mag.* 4390.)

MITRARIA COCCINEA—SCARLET-FLOWERED.

Gesneriaceæ. Didynamia Angiospermia.

Messrs. Veitchs', of Exeter, introduced this very ornamental flowering plant into this country from San Carlos de Chiloe, where it was discovered by their collector. It is a climbing shrub, having the habit of a Columnea. It grows about a yard high. The foliage is small oval, about an inch long. The flowers are borne along the branches, and hang on long footstalks, very similar to the common Fuchsias. Each blossom is tube-shaped, but ventricose, that is, widest at the middle, an inch and a half long, and about three-quarters of an inch through its centre, of a rich vivid scarlet colour. It is a neat shrubby plant, blooms most profusely, and is expected to prove quite hardy. It deserves to be in every garden. (Figured in *Pax. Mag. Bot.*)

STYLIDIUM SCANDENS—CLIMBING.

Stylidiaceæ. Gynandria Tetandria.

There are near fifty species of this very interesting tribe of flowers, all introduced into this country from New Holland and Van Diemen's Land, and various parts of Australia, where they grow abundantly on open sandy plains, where the soil beneath is wet and spongy. The S. scandens is a perennial, the stem rising half a yard high, branching. The flowers are usually produced in corymbose heads, but occasionally in terminal racemes; they are of a pinky-lilac colour. It is a very interesting species, and is in Mr. Low's collection at Clapton Nursery. It is well worth a situation in the greenhouse.

The following beautiful hybrid Epacrises have recently bloomed, too, at Mr. Low's. They are of the habit of E. impressa. Epacris delicata, almost white; a very large flower, and profuse bloomer. E. bicolor, a deep red with white; similar in form to E. grandiflora, but a larger size. E. densiflora, rose colour with white tip. E. campanulata, a wide-mouthed bell-shaped flower, and a rich crimson colour. E. andromedæflora, in form like the Irish Heath, blossom of a pretty rosy-flesh colour. They are all very handsome varieties, and a valuable acquisition to this lovely tribe, and well deserving to be added to every collection.

The following Pæonias were sent from China by Mr. Fortune to the Horticultural Society, and planted in the garden at Chiswick. They are described in the published Journal of the Society.

PÆONIA MOUTON ATROPURPUREA.—The flowers are nearly single, having only a few small petals in the centre; they are of a deep lilac or purple; very handsome. The plant is a vigorous grower.

PÆONIA MOUTON PARVIFLORA.—The flowers are very double, the centre being well filled up with narrow petals. It is of a pretty rose colour.

PÆONIA MOUTON GLOBOSA.—This is one of the finest of the Moutons. The flowers are very double, large, and of fine form.

PÆONIA MOUTON SALMONEA.—The flowers are very double, flesh coloured. The outer petals, when fully blown, are of a salmon colour. The plant is of a dwarf habit, and a very beautiful variety.

PÆONIA MOUTON LILACINA.—The flowers are very double, pinky-blush shaded with a deep lilac. The centre of small petals is darker in colour than the other portion of the flower. It is a very pretty variety.

Angelonia angustifolia.—Sent from Mexico by Mr. Hartweg. It is a half shrubby hothouse perennial plant, which blooms all the summer. The flowers are of a deep violet colour. It is a dwarfish plant, and blooms very profusely. In a warm greenhouse we doubt not but it will flourish equally as well as some of the other species now do which formerly were only grown in the hothouse. (Noticed in the *Jour. Hort. Soc.*)

Miltonia Karwinskii.—This beautiful species is from Mexico, and is in fine bloom in the Horticultural Society's Garden at Chiswick. The flower-spike is four feet long, and a separate blossom is a little more than two inches across. The sepals and petals are blotched with brown upon a clear yellow ground colour. The lip is large, one half white and the other violet. It is a very handsome, showy species.

Gesneria magnifica.—This very splendid species is in bloom in the Royal Gardens of Kew. The flowers are of a bright scarlet colour, and each three to four inches long.

Achimenes pulcherrimus.—This very pretty kind grows erect, half a yard to two feet high. We find it to bloom very freely. A separate flower is near two inches across, with a tube about that length. The flowers are of a pretty violet colour, having a yellow centre beautifully spotted with dark. It merits a place in every collection.

Stigmatophyllum ciliata.—This plant is in the greenhouse at the Royal Gardens of Kew, and is trained to a pyramidal wire trellis. The flowers are of a rich yellow, each about two inches across. They are borne in heads of five or six together. The edges are beautifully fringed. It deserves to be in every greenhouse. Profuse in flowering and very ornamental.

Lobelia ramosa.—This very pretty annual makes a fine plant for the open border, or for bedding. It grows about a foot high, and its profusion of blue and white broad flowers give a pretty appearance. Several beds of it are in the Royal Gardens of Kew, and they are much admired.

Tecoma leucoxylon.—This fine species is in bloom in the magnificent new conservatory at Kew. The tube of the flower is two inches and a half long, and the expanded mouth about four inches across. They are of a pretty lilac-pink, having a bright sulphur centre, and the tube is a pale sulphur. It is a very desirable plant.

Tecoma jasminoides.—This most lovely climber is still in fine bloom. The pure white flowers, with a crimson centre, are very handsome. The plant ought to be in every greenhouse. It trains well to a small circular wire trellis.

THE NERIUM OLEANDER.

In a recent number of this Magazine I noticed an inquiry about the culture of the above plant, and a subsequent number contains a reply thereto.

I have cultivated this very fine flowering plant for many years, and in the mode of treatment I have pursued it has not failed to bloom magnificently. One common rule I have invariably followed, namely, to keep it growing at the growing season, and when it had done blooming I allowed it to rest, that being its natural requirement every season. By these simple attentions it is as easy to grow and bloom satisfactorily as to do so with any common free-growing greenhouse plant.

The plant requires two parts of rich turfy-loam to one of turfy-peat, and a very liberal drainage. The soil must not be sifted, but chopped, with a sprinkling of bits of porous stone, charcoal, &c., in it. It requires a good portion of pot-room, and as the pot fills with roots it must immediately be re-potted into a larger. It also requires a free supply of water when growing and blooming, but when it has flowered the supply of water is gradually lessened, and the plant kept nearly dry during the season of rest, which is usually from the 1st of December to February; and as soon as it is deemed desirable to promote the growth, the plant is carefully re-potted into a larger pot, and placed in the warmest part of a greenhouse, or into a moderate hot-bed, tan-bed, &c., plunged in the same, so that the growth is promoted by the roots being thus excited. As the season advances, this is not so necessary, but it always greatly contributes to success to do it at the early stage of growth. In order to get the flowers to expand properly, a week or so of high temperature in a frame, or similar habitation, is quite essential.

I strike a few young plants from cuttings each year. Young shoots, of tolerable firmness, cut off close under a joint, about four or five inches in length, inserted in white sand, and the pots plunged into a tan or dung bed, soon strike root. I allow these to grow till about half a yard high; I then pinch off the lead of some, to induce the production of side shoots, and such make pretty bushes, and when in full bloom, are handsome objects. I allow a portion to grow and bloom from the one single erect stem; such heads are extra fine. I give manure-water occasionally, to promote their vigour.

The plant bears cutting-in well, however old it may be; it is easily formed into a bush, but I rarely keep a plant beyond the fourth season from striking.

I repeat, at particular periods the plant wants rest and a low temperature, at others higher temperature, to promote growth and bloom.

ON THE VIOLET—VIOLET ODORATA.

THE Violet that so beautifully embroiders the banks of our hedge-rows, and so sweetly perfumes the morning air of the spring, is scarcely less a favourite than the Rose, which has, by universal consent, been made the emblem of beauty, leaving the no less admirable quality of modesty to be represented by the Violet.

The Violet seems too humble a flower to have found a place in displays of heraldry, yet it has been ingeniously given as a device to an amiable and witty lady of a timid and reserved character, surrounded with the motto, "*Il faut me chercher*"—I must be sought after.

The White Violet is also made the emblem of innocence; and by some lines of a sonnet of the sixteenth century, the Violet appears to have been considered an emblem of faithfulness:—

" Violet is for faithfulnesse
Which in me shall abide;
Hoping likewise that from your heart
You will not let it slide."

The poets have coupled the most agreeable ideas with this fragrant flower. Milton makes Echo dwell amongst Violets:—

" Sweet Echo, sweetest nymph, that liv'st unseen
By slow Meander's margent green,
And in the Violet-embroider'd vale."

Shakspeare compares the soft strains of plaintive music to the perfume of Violets:—

" That strain again; it had a dying fall:
O, it came o'er my ear like the sweet south,
That breathes upon a bank of Violets,
Stealing, and giving odour."

That the Violet was a favourite with Shakspeare is most evident, by the beautiful simile he makes Perdita deliver in the Winter's Tale:—

" Violets dim,
But sweeter than the lids of Juno's eyes,
Or Cytherea's breath."

Mr. Barry Cornwall places the Violet even before the Rose, and we agree with him, in a moral point of view, that modesty is more desirable than beauty; but, as florists, we must always acknowledge the Rose as the queen of flowers.

Of the Violet he says—

" It has a scent as though love, for its dower,
Had on it all his odorous arrows tost;
For though the Rose has more perfuming power,
The Violet (haply 'cause 'tis almost lost,
And takes us so much trouble to discover)
Stands first with most, but always with a lover."

This poet, like most of his competitors, dwells upon the Blue Violet, overlooking the innocent and sweet flower altogether:—

" And Violets, a blue profusion, sprung
Haunting the air."

" And Violets, whose looks are like the skies."

" Or when the blue-eyed Violet weeps upon
Some sloping bank."

Virgil tells us—

" The daughters of the flood have searched the mead
For Violets pale."

This flower was in such high estimation with the ancients, that one of the prizes of the Floral Games consisted of a Golden Violet, and we are told in their fables that Ia, the daughter of Atlas, fleeing into the woods from the pursuit of Apollo, was, through the power of Diana, changed into a Violet, which still retains the bashful timidity of the nymph, by partially concealing itself from the gaze of Phœbus in its foliage.

> " The trembling Violet, which eyes
> The sun but once, and unrepining dies."

Mythologists also tell us that Proserpine was gathering Violets as well as Narcissuses when she was seized by Pluto.

Ion, the Greek name for this flower, is said to have been given it because Io fed on Violets: others tell us that it was so called after some nymphs of Ionia, who first presented these flowers to the father of the gods.

That the ancients were acquainted with anagrams we learn by Lycophron, who lived in the time of Ptolemy Philadelphus, about 280 years before the Christian æra commenced. This Greek grammarian found in the name of Ptolemy the Greek word for honey, and in that of the Queen Arsinöe, Violet of Juno.

The Sweet Violet, *Viola odorata*, when growing naturally, is found on banks where the soil is light, and where it has partial shade. It seems to love a mixture of chalk in the earth, as we have observed that it propagates itself most rapidly in such situations, both by its runners, in the manner of strawberries, and also by seed.

In dissecting the blossom of the Sweet Violet the students of phytography will have clearly demonstrated to them the utility of the nectary to the parts of fructification. What is termed the spur *calcar* of the Violet, wherein the honey is secreted, is a little bag formed by the lower petals, and this is distinguished from other nectaries by the appellation of *nectarothecæ*. In carefully taking off the petals of the Violet, and splitting open the nectary with a pointed penknife, it will be seen that the two lower anthers have a tongue or tube attached to them, which descends into the spur, evidently to draw up the nectareous juice for the invigoration of the anthers, or to assist in the decomposition of the farina. Nature has guarded the nectary of the Violet in a manner that must excite our warmest admiration, and which at the same time must strengthen the opinion that this saccharine juice is of the most vital importance to the sexual parts of plants, as it is always attached to the flower under some shape or other, and more or less exposed to the intrusion of those insects which subsist on the honey of plants. As the Violet blossoms in a season when there are but few plants in flower, nature seems to have taken a double precaution to secure the entrance of the spur against intrusion. For this purpose, the two side petals are furnished with a kind of beard, which keeps out the smallest insect; at the same time it admits air, which appears to be necessary in the formation of the nectar or honey. The entrance of the spur is grooved on the under side, but this channel is occupied by the stigma, which bends its hook into the groove, as if to partake of the effluvia of the nectar.

The stigma of the Sweet Violet, when attached to the seed-vessel, is not unlike the ostrich in shape, but when the corolla and the calyx are carefully removed, leaving only the parts of the fructification attached to the receptacle, a most beautiful miniature bird is represented; the stigma forming the head and beak, the anthers make a golden breast, whilst their tongues appear like a pair of green wings.

It was the Violet which induced John Bertram, a quaker of Pennsylvania, to study plants. He had employed his time in agricultural pursuits without a knowledge of botany, but being in the field one day he gathered a Violet, examined its formation, and reflected upon it, until he became so prepossessed with the flower that he dreamed of it. This circumstance inspired him with a desire of becoming acquainted with plants; he therefore learned for that purpose as much Latin as was necessary, and soon became the most learned botanist of the new world.

The Violet is the precursor of floral odours which so successively follow each other after the departure of their sweet harbinger as to lessen our regret for the loss of its fragrant blossoms. Both the White and the Purple Violet have had their flowers doubled by the art of cultivators, and they have been found wild with this departure from nature. Double Violets are easily increased by parting the roots in the autumn, and as it is so universal a favourite, no flower garden should be without it, nor should any gardener omit to pot it for the use of the saloon. In Paris, notwithstanding the arbitrary regulations of fashion, which reaches even to the sale of flowers, the Violet constantly holds its rank as a favourite, on which account the French florists check the early flowering of some of their plants, so as to secure blossoms in the height of summer, and we have frequently met with them at the celebrated *Marché aux Fleurs* in the months of August and September; nor are *les Dames de la Halle*, nor the admired *Vendeuses de Fleurs*, at Rouen, without a supply of Double Violets at that season of the year.

> "Between her breasts, that never yet felt trouble,
> A bunch of Violets, full blown, and double,
> Serenely sleeps."

To wear Violets in Paris denotes the person to belong to the Liberal party.

It is related of Mademoiselle Clairon, a celebrated French actress, that being passionately fond of Violets, a friend cultivated them so as to give her a nosegay of these flowers every morning during their season. This fragrant offering lasted thirty years, and to lose nothing of a gift which friendship and constancy rendered so precious to her who received it, she stripped off the flower petals every evening, and took them in an infusion like tea.

The growth of the Sweet Violet is not confined to Europe; it perfumes the palm groves in Barbary during winter, it flourishes in Palestine, and both Japan and China boast of this fragrant flower. Hasselquist tells us that it is one of the plants most esteemed in Syria, and particularly on account of its great use in making Violet sugar, of which they make sorbet. Tavernier says that the most esteemed sherbet of the Turks, and which is drunk by the Grand Signior himself, is made of sugar and Violets.

ON ECCREMOCARPUS SCABER, MAURANDIA BARCLAYANA, &c.

In answer to an Inquirer concerning the flowering of Maurandia Barclayana and Eccremocarpus scaber, an amateur begs leave to state that these plants will not fail to succeed in a warm aspect and a fair share of tolerably light, good soil. It is a very common mistake with amateurs, who purchase a plant which they are told will grow out of doors, to think that it will grow in any situation. Thus, if a creeper, it is often placed against a wall, in a narrow space between two fruit trees, where, if it has sun to its leaves, it has no moisture to its root; or, being intended to cover an unsightly wall, it is put into the ground at the bottom of it, under every disadvantage for want of warmth, light, and air, and is never likely to reach the top, except in the owner's imagination. My experience of the Maurandia Barclayana leads me to believe that it cannot fail to bloom well out of doors, if it has a good share of sun, and is planted out in the ground. In very hot weather (my Maurandia being in a full south aspect), I have found it useful to put moss about the root to keep it moist. The Eccremocarpus will grow and flower well in a less warm situation, but it must have a tolerably rich soil, room, and a free circulation of air. It does admirably trained to a trellis against a wall in a warm situation. Plants which are not generally found hardy enough to stand our winters in the open air require as much of the warmth of our summers as possible to bring them to anything like perfection. Slips of the Maurandia are easily struck in summer, even without a glass, by placing the pot in which they have been planted in a warm spot, under the shade of some leafy plant, care being taken that they do not droop for want of water. The young plants may be preserved during the winter in a warm room or light frame. Such as have flourished well during the summer in the open ground will most likely stand the winter, if matted up before very severe frosts. I have seen it against a north wall live without any protection, and bloom profusely year after year.

ON BENTHAMIA FRAGIFERA.

BY MR. W. B. BOOTH, CARCLEW, CORNWALL.

It is now a good many years since I first had the pleasure of bringing this fine shrub under your notice, and of sending you the sketch from which the figure in the *Botanical Register*, fol. 1579, was made. At that time I only knew the plant from specimens furnished to me from the garden of J. H. Tremayne, Esq., at Heligan, in this county, where it was raised from East Indian seeds; but the opinion I then formed of it was such as led me to think it would be a valuable acquisition, should it prove sufficiently hardy to live in the open air in England. In this respect I am happy to say my anticipations have been fully realized, and of its value as an ornamental shrub you will yourself be enabled to judge from the specimens which I now forward. [Most beautiful branches of grey leaves, and huge cream-coloured flowers, four inches across, composed of six petals.]

You can scarcely imagine a more graceful and striking object at this season of the year, when every branch, on trees fifteen or eighteen feet high, and nearly the same in diameter, is thickly studded from top to bottom with large cream-coloured flowers, somewhat resembling those of the old and well-known Clematis florida. In the latter part of autumn, again, it is even still more beautiful when loaded with its rich red, pendent, globular fruit, not unlike a strawberry.

For planting in a sheltered part of a shrubbery, where it can have plenty of room to show itself to advantage, or even singly on grass, I do not know a more suitable plant. It accommodates itself to any common garden soil, but requires to be eight or ten years old before it comes into blossom.

[We have extracted the above from the *Gardeners' Chronicle*, and although we gave a figure of the fruit several years ago in our Magazine, and have since inserted some commendatory observations, we think the shrub so worthy of an extended admission into our shrubberies, especially in warm, dry situations, that we are induced again to bring it to the notice of our readers.—EDITOR.]

REMARKS ON PINKS.

IN our number for July we inserted the particulars of the numerous collections of this lovely flower which were exhibited at the London shows. We examined them carefully, in order to make a selection of what we considered were of approved form and excellence. The most perfect formed were, Norman's Seedling, Smith's Diana, Wilmer's Laura, Norman's Lord Hardinge, Looker's Seedling, Kerr's Harriet, Young's Double X, Young's Lady Mildmay, Lord John Russell, Smith's Oxoniensis, Kirtland's Prince Albert, Hodge's Melona, and Kent Hero.

Our respected friend Mr. Wood, conductor of the *Midland Florist*, gives a list of half-a-dozen which are esteemed first rate in the neighbourhood of Nottingham, viz., Young's Double X, Marsden's Jenny Lind, Read's Mary Ann, Marris's Rosalind, Cant's or Maclean's Criterion, and Hudson's Duke of Devonshire. In this publication there is, too, some remarks on the Pink by our worthy friend Mr. John Slater, who is anxious that a general approved standard of properties should be agreed upon. In some of our previous volumes of the CABINET, we have inserted several articles on the Pink by Mr. Slater, and have much pleasure to be able to give an extract of what he gives on this occasion—

"We hear of rose-leaved Pinks raised in the south, but unfortunately, when they get into our cold climate, they would, if placed in a lathe, serve for circular saws. Does nature deal with the Pink as with animals, in a northern climate, that is, furnish it with an extra coat, to keep it warm? and is the fringe on the end of the petals of the delicate rose-leaved Pink for that purpose?

It is useless to expect improvement in the Pink, unless we set our faces against all varieties that do not come up to the following standard. Large flower, well-formed pod, good ground colour, the red lively, the purple dark, the lacing the same colour as the centre, to consist of at least fifteen petals, above all to be rose-leaved in the strictest sense of the word, and the centre colour to form a true circle, or, as it is termed, a moon.

"The northern taste is semi-barbarous. We have Pinks shown with only eight petals, Carnations and Picotees with ten; and all this is owing to the societies not laying down rules for the judges. No Pink ought to be allowed to win, unless it has fourteen petals; and no Carnation or Picotee under eighteen. If this were adopted throughout England, we should soon arrive at something to be proud of. The mops of the south would look as if they had become civilized, instead of being half barbarous and ragged.

"It may not be out of place just to hint at properties being published as a guide for judging florists' flowers, which are rarely adhered to, and hence all is confusion; but more of this in a separate article.

"The question, how are we to obtain this desirable improvement in the Pink? naturally arises. I answer, by seeding only from the best, and keeping them from the saw-edged ones. The following are a few in the right direction, and as the Pink blooms and shows itself the year after it is sown, and is easily increased by pipings, we should soon gain a little upon the old ones:—

"BLACK AND WHITE.—Whalley's Beauty of Clayton-le-Moor, and Fairbrother's Beauty of Blackburn, are rose-leaved; Kay's Mary, and Virgin Queen are nearly so, and possess good colours.

"RED-LACED.—Joseph Sturge, Etchell's Susanna, Falkner's Dreadnought, and Brundrett's Sir William. These are the finest edged ones out, and are rose-leaved.

"PURPLE-LACED.—Boot's Richard Cobden, Taylor's Solon, Jones's Huntsman, Kirtland's Prince Albert, Duke of Northumberland, and Hodge's Mars. The three last are from the south.

"These varieties only, if planted at some distance, in the garden, from others, and seed taken from them, would soon repay for the trouble, by producing something good."

ON SALVIA GESNERIFLORA.

BY W. L.

I HOPE I am not too late to have a reply to this query. In your Number for May, 1847, Salvia gesneriflora "which is readily induced to bloom at any season." I had this plant last year, and now have several, one of which is very large, but shows no disposition to flower, nor have any plants flowered with me. How are they made to flower?

[During winter our plants are kept with the Fuchsias, so as just to be saved from frost. This being the season of rest, they are kept only moist so as to be preserved from drooping. At the end of February an increase of temperature is allowed, and an increase of water given. They soon show blooming spikes, and as soon as these appear, the plants are removed, with entire balls, into larger pots, and they bloom profusely, with the usual treatment of water, &c. By allowing plants a rest, &c., they may be brought into fresh bloom at any season desired. It is a very splendid plant when in bloom.]

ON RAISING THE RANUNCULUS FROM SEED.

BY MR. WILLIAM WEBB.

As you express a desire to know my method of raising that most lovely of all florists' flowers, the Ranunculus, from seed, I feel a pleasure in giving you the desired information; but at the same time, if any of your correspondents know a better mode of raising them, I shall be highly gratified to see it in your interesting FLORICULTURAL CABINET.

Having collected a quantity of seed from the best semi-double flowers, taking care the petals are large and good in colour, I keep it on the heads of the stalks in a dry place till April, when I rub it off in order to sow it, having previously prepared a compost of the richest loam, composed of one-third rotten dung from a cucumber-bed, and two-thirds of trenching earth from rich meadow land. I fill the largest pots I have up to the top, taking care to level the soil; I then take the seed and sow it; but should it not appear to be equally sown, I take a feather and just move it so as it be equally spread all over the pot, and with the bottom of another pot press the seed and earth about half an inch from the top; as soon as this is done I cover it by sifting some fine earth upon it, about the thickness of a crown piece; I then give it a gentle watering by means of a hair sieve, or one made from coarse stiff muslin, strained on a hoop sufficiently large to cover the surface of the pot, and prevent the earth being washed from the seeds. This method appears to me quite as well as pipes luted to the pots, and at considerable less trouble and expense. The pots are then placed in a situation where the sun cannot have the least influence by shining upon them; in about four or five weeks the plants appear, and at that time I find it necessary to keep them well watered, and when the weather proves dry in the following month (May), they are watered every day. I have at this time several thousand seedlings, and had they been exposed to the intense heat of the sun and not watered I should have lost them to a plant. In the month of August the foliage will begin to decay, and when sufficiently ripe the roots must be taken up, which can be easily done in the following manner:—Take about one inch and a-half off the surface of the pots, and place it on a table, where you can easily discover the roots (some of which have only one claw, and not larger than a common sewing needle); they are to be put into a box covered with fine sand, and kept in a dry place till the time of planting, say the latter end of January, or beginning of February. The first fine open weather I plant my seedlings, similar to the old roots, with this difference,—the planting board I make use of is only three inches from the centre of one hole to the other; after the holes are made I put one root in a hole with the crown uppermost, and cover with some of the same compost that I use when I sow the seed. After they are come up, should the weather prove dry, they are watered every day, or else they will not bloom. I select the finest for my best bed, and the remaining semi-doubles whose petals are good, finely striped, spotted, or edged, I save my seed from.

GARDENIA WHITFIELDII.

A DOUBT was expressed by Mr. Whitfield, subsequently to his introduction of this plant into European gardens, as to its flowering, at least until it had attained considerable age and size, which would have rendered it totally unfit for general culture, and quite useless to those possessing only limited means, and who are naturally chiefly desirous of cultivating free flowering plants, more especially such as are highly fragrant. That this Gardenia holds out the latter inducements I have much pleasure in affirming, having recently bloomed it in perfection.

About two years ago, a cutting, then recently struck, was shifted into a 6-inch pot, using turfy loam and peat intermixed with a little silver sand; it was then placed in a tan bed in a stove, where a high and humid atmosphere was constantly kept up. During the summer it grew vigorously, and towards autumn it was allowed to harden its wood and go to rest until the following spring, when it was repotted with similar compost into a 12-inch pot, and again plunged into the bark-bed, when abundance of heat and moisture was maintained. By the close of summer it had made a good growth; it was then, as formerly, induced to ripen its young shoots and set its blooms. In order to prevent the plant from flowering at an unfavourable season, it was removed from the high temperature of from 70° to 80°, to which it had been exposed during its season of growth, into a colder and drier atmosphere, where a temperature ranging only between 50° and 60° was kept up. In this situation it remained during winter. About March last it was placed in a warmer house, where its flower-buds gradually began to push. By the end of April they were 6 inches long, and hanging down like inverted trumpets; they began to expand, presenting a novel and beautiful appearance, being 3 inches and upwards in diameter at the mouth and nearly white in colour, contrasting charmingly with the large green foliage. Altogether it is one of the most striking plants I have ever seen in flower, and very desirable for any collection, even supposing it was quite scentless; but, unlike the other large tubular-flowered species, which are only slightly fragrant, this possesses nearly the fragrance of the Cape Jasmine, a desideratum, I presume, not unimportant to those who delight in highly odoriferous flowers.

One of the best and at the same time most simple systems in the culture of Gardenias is, to place them during the season of growth in a pit or frame filled with tan, and the heat promoted by linings of stable litter; and to those who have no other convenience than merely a greenhouse to receive them when in bloom, this plan may be pursued with success. Indeed, it is the mode adopted by those who so largely cultivate the Cape Jasmine for the London market; and their success must be obviously impressed upon the minds of all who traverse during summer the streets of London. — (*R. Glendinning*, *Gardeners' Chronicle.*) [This plant was also published under the name of *G. malleifera* in the "Botanical Magazine;" but two or three years after it had been named G. Whitfieldii in the "Botanical Register."]

ON THE CULTIVATION OF ACHIMENES.

BY MR. RUSSELL, AT THE STUDY, EXOTIC NURSERY, CHELSEA.

Amongst the lovers of flowers the Achimenes has become a general favourite, and I know of no other genus of plants more deserving of our special notice. They are plants of the easiest cultivation, continuing in flower for several months. They flourish in any free soil, and are more easily propagated than any plant with which I am acquainted. They can also be had, with a little extra care and attention, in flower all the year. Their native habitat is Mexico and the West Indies; and of late some very distinct varieties have been added to our collections, by fresh importations and from seed. With these preliminary observations, I proceed to make the following remarks upon its cultivation.

Supposing them at rest in the pots in which they flowered during the previous year, about the beginning of January, select a few pots of each variety, top dress them with leaf mould, and then place them in any pit, or dung bed, in a bottom heat of about 80 degrees, and an atmospheric temperature varying from 60 to 80 degrees; they must be kept rather moist, and then they will soon begin to vegetate: when they have attained the height of two or three inches, transplant them at once into 8-inch pots, well drained, and in a mixture of loam, peat, and leaf mould, in nearly equal parts; adding a little silver sand, and charcoal if convenient, and using the whole in as rough a state as possible. After the operation of potting, they must again be placed in the pit, or dung bed, kept rather close for a few days, admitting air according to the state of the bed and the weather. A nice heat must be kept up as before recommended. Particular attention must also be paid to watering, looking over the plants in the afternoon, watering only such as require it, and afterwards sprinkling. As the season advances they must be shaded with coarse canvass for a few hours in bright sunshine; as they come into flower they ought to be removed into the conservatory or warm greenhouse, where most of the varieties do beautifully. Care, however, must be taken against cold air, and cutting winds. Single plants of the tall growing varieties, such as pedunculata, will make nice specimens, by stopping at every joint, for a few times, and staking. But I recommend planting four or five in a pot, and stopping them two or three times, which will cause them to form nice bushes. Longiflora should be planted a little closer. Those required for specimens should be usually staked, allowing a few to ramble, which have a graceful appearance hanging over the pots. This variety does most beautifully in baskets; planted in peat, charcoal, and moss, they require to be well watered, and occasionally (along with those in pots) with liquid manure. Picta is a great favourite, and amply repays a little extra care. By propagating from the leaf in autumn, this variety can be had in flower early in spring. As I have already stated, they are easily propagated; cuttings will strike in a few days; they will also grow freely from the leaf, and by dividing the scaly bulbs, some of the varieties form small bulbs on the wood, which make equally as good plants as those from large bulbs or cuttings. By bringing in a few pots of each variety every month, taking care to note the time of introduction into heat, a succession can be kept up all the year. Most of the varieties stand admirably in the drawing-room, especially pedunculata, hirsuta, and grandiflora. After they have done flowering, and the bulbs matured, the stems die off, and then the bulbs require no more care than keeping perfectly dry, and free from frost.

SPLENDID ROSES.

During the exhibitions which have taken place at the Horticultural Society, Royal Botanical Society, and the South London Society Gardens, we paid particular attention to take a descriptive list of the very best formed Roses that were shown. The following we can recommend as valuable in any collection. They are beautiful both in form and colours.

Paul Joseph.—Rich purple and crimson.
Geant des Batailles, Hy. Per.—Rich deep scarlet.
Miss Glegg.—Pure white with a blush centre.
Madame Nerard.—Beautiful pink.
Eugene Beauharnais.—Rose and lilac.
Franklin.—Bright red, tinged with lilac.
Reine des Belgie.—Very pure white, with a tinge of lilac to centre.
Lady Stuart.—Beautiful silvery blush.
Princess de Lambelle.—Very pure white.
Madame Hardy.—Very pure white.
Victor Hugo.—Fine rosy-lilac.
William Tell.—Very vivid rose.
Glory of France.—Rich rosy red.
Hortense le Roy.—Bright rose.
Honore Montmorency.—Red, with shades of violet.
La Sylphide.—Very handsome blush.
Lady Alice Peel.—Vivid crimson, fine.
Scipio.—Rich shaded crimson.
Narcissus.—Yellow, beautiful.
Saffrano.—Large yellow.
La Fille d'Air.—Beautiful pale flesh.
Louis Philippe.—Rich deep red.
Souchete.—Vivid carmine and crimson.
Marechal Lannes.—Bright red, shaded with violet.
Eliza Sauvage.—Yellow, with buff centre.
Cymedor.—Fine rosy red, shaded with lilac.
Madame Audot.—Beautiful blush, with rose centre.
Grandissima.—Very brilliant crimson.
La Volupte.—Rich dark rose.
Boule de Nantiel.—Superb purple crimson.
Letetia.—Dark rose, with distinct beautiful veins.
Reine des Fleurs.—Pretty rosy pink.
Reine de Viergas.—Beautiful blush.

Coup d'Hebe.—Bright flesh pink, beautiful.
Duke of Devonshire.—Rose, with white stripes.
Brennus.—Vivid carmine.
Madame Verdier.—Rich salmon pink.
Duchess of Sutherland.—Rich rose, finely mottled.
Couronne d'Amour.—Bright rosy-red, beautiful.
Reine de Matin.—Rich rosy purple.
Bizarre Marbre.—Mottled crimson.
Comte de Montalivet.—Rich crimson, with a lilac tinge.
Comtesse Mole.—Very rich deep rose; superb.
General Allard.—Bright rosy red; fine.
General Jacqueminot.—Rich crimson and violet; superb.
Illustre Beaute.—Handsome delicate blush.

ON A FOUNTAIN, &c.

BY AN OLD SUBSCRIBER.

I BEG to thank the Conductor for attention to me on a former occasion, and to ask for some information which I have searched for in the volumes of the CABINET unsuccessfully, as they contain nothing to my purpose.

I have very lately had a Fountain erected in my garden, which is supplied from a cistern at the top of the house, and so far all is well; there is no fault in its play, but the water in the basin became early very green on the top, and this being removed by skimming, it is nevertheless discoloured and thick; and though a month has elapsed, it seems likely to continue so. Two plants have been introduced into it, and they do not thrive, and also some gold and silver fish. The material of the basin is brick laid in mortar, with an inner coating of cement. Can some reader inform me what error has been committed in the construction, or otherwise, and what must be done that the contained water may be clear? An answer in an early number will oblige.

SKETCH OF THE VEGETATION OF CALIFORNIA.

THIS very interesting portion of what is termed the New World, has furnished this country with many of the handsomest of our annual flowers, numerous Shrubs, Pinuses, &c. Mr. Douglas went out as a collector, and sent over many valuable things; his success and decease induced the Horticultural Society to send out a collector, viz., Mr. Hartweg, who had already obtained many fine plants from Mexico, and the details of his journey are published in the *Journal of the Horticultural Society*, from which the following extracts are selected:—

"I arrived at Vera Cruz on November 13th, 1845, and being situated on the eastern declivity of Orizaba, commands a fine view of the lowlands of Vera Cruz. Having only a short time to spend here, I made an excursion to the colder district of Orizaba, by passing through a deep ravine to the village of Chichiquila. Here I found a Magnolia, forming a large tree with oblong shining leaves, several species of oaks, Garrya macrophylla, Cobæa scandens, Lophospermum scandens, two species of Viburnum, a Cornus, Tilia mexicana, a Juniper forming a small tree, Pinus Pseudo-strobus, and P. Llaveana, the latter with rather more elongated cones than those found near Zimapan.

" On the 29th of November, I arrived at Jalapa, and taking the diligence for Mexico, I arrived in the capital on the 3rd of December. After a stay of two days, during which time I delivered my letters of introduction, I left for the Hacienda de Laureles, near Anganguco, where seven years previously I found Achimenes patens and heterophylla, the objects of this journey.

" On the 13th I returned to Mexico; I went in search of Abies hirtella, of which Humboldt gives the locality at ' El Guarda,' an insignificant military post on the road to Cuernavaca, at a distance of 30 miles from the capital. El Guarda is situated on a lofty plain; the only silver firs within view are on the mountain half a mile to the south; this is a little wood covering only the north side of the hill, and consists entirely of Abies religiosa. From inquiries I made at El Guarda respecting another silver fir growing about there, I could learn nothing satisfactory. From my own experience I am sure that it does not grow, if at all, within six miles of El Guarda. This excursion, however, has not been fruitless, for I found near Ajusco a Pine I had never seen before, and which I suspect to be Loudon's Pinus Montezumæ; it has the same glaucous appearance as P. Montezumæ in the Society's Garden, but shorter leaves, smaller and more pointed cones. It forms a tree of about 40 feet high, and from the upright leaves and habit in general, it has much the appearance of Pinus Pinea.

" On the 28th I left on horseback, and arrived in Tepic on the 1st of January, 1846, after five days' hard riding. The town of Tepic is situate in a plain at an elevation of nearly 3,000 feet above the level of the sea, and enjoys a temperature of 80 degrees in summer, and 60 to 70 degrees during the winter months. Most tropical fruits and sugarcane are cultivated here. In the S.W., at a short distance from the town, is a range of mountains, of which the highest part is called the Cerro de San Juan. The principal forest trees are Pines, one of which closely resembles P. macrophylla, with beautiful long foliage, and cones varying from 12 to 16 inches in length. This forms a tree from 60 to 80 feet high. Another species of Pine, forming an equally large tree, is called by the natives Ocote hembra (female pine, in opposition to the first, which is named Ocote macho, or male pine). The foliage of this new species is 16 inches long, and the cones measure from four to five inches in length. This is not frequently met with, and the cones are produced more sparingly than in the other kind. The more elevated parts of the Cerro de San Juan are covered with oaks, an Arbutus, a shrubby Bocconia, several syngenecious shrubs, a white flowering Ceanothus, Bouvardia splendens, and among herbaceous plants I observed Lobelia laxiflora, Spigelia scabriuscula, with a head of crimson flowers resembling at a distance Phlox Drummondii, a half shrubby Pentstemon with large pink flowers, Macromeria exserta, Aristolochia brevipes, and the showy Lamourouxia multifida and cordata.

" On January the 8th, passing over the plain of Tepic in an easterly direction, after a ride of six hours I entered the Monte de los Quartos, a forest consisting chiefly of oaks with a few pines intermixed; the only plant in flower was Lupinus Ehrenbergii; on the banks and in the dried-up bed of the rivulet that crosses the mountain, Littæa geminiflora, with a flower-stem from 12 to 18 feet long, but bent down by the weight of its numerous seedpods, grows abundantly. In the evening I arrived at the village of Ocotello. About noon the following day I reached the hamlet of Auseta, situate at the foot of the volcano Tetitlan. Having with difficulty procured a guide to ascend the mountain, and provided the necessaries, including a calabash with water, we set out and arrived before sunset on the north-western declivity of the volcano, where we encamped for the night in a beautiful pine forest. At seven o'clock on the 10th, leaving our horses in charge of my servant, I began to ascend with the guide, who, being armed with a machete (a kind of long knife), cleared a path among the brushwood and long grass that encumbered our way. After a continual steep ascent of four hours, through a forest composed of that long-coned Pine found near Tepic, a few Oaks, Mimosas, a Laurus, Garrya laurifolia, and a Fraxinus, we arrived at the ledge of a black volcanic mass, destitute of all vegetation.

"On the 20th I had crossed the plain of Tepic in a southerly direction, leaving the Cerro de San Juan on the right. After an easy ride of three hours, we entered a ravine through which a stream that we had to pass several times winds its way. The vegetation here assumes a tropical character, and furnished me a Cattleya, Stanhopea, Mormodes, Catasetum, and an Epidendrum, none of them however in flower. The vegetation, as far as the small village of Matanejo, where we arrived in the evening, affords little interest at this season. The copsewood covering the sides of the ravines is composed of deciduous leafless shrubs, only relieved by a giant Cereus, forming a singular tree; this generally has a single stem two to four feet high, by eighteen inches in diameter, when it divides into numerous triangular branches, rising perpendicularly to the height of twenty to thirty feet. In May it yields a delicious fruit called Pitaya, when it is much sought after by the natives.

"Leaving Matanejo early the following morning, we soon entered a forest of Oaks; here I found two species of Epidendrum, an Oncidium, Odontoglossum, and an Epiphyllum, the latter, like E. Ackermanni, inhabiting trees. Although I have not seen it in flower, yet judging from its broad deeply-cut leaves, or rather stems, it will prove a valuable acquisition to that interesting tribe of plants. The timber of the Oak does not bear a high character as to durability; when exposed to the weather it soon rots, and the trees, however healthy they appear to be, are generally hollow in the centre.

"I set out again on the 7th of February for San Blas. Descending by the road usually travelled during the dry season, we arrived in the evening at the farm of La Manuela, situate in a wood of Acacias, Prosopis, Laurus, Palms, Cedar, the Lemon, a species of Citrus, and several species of Ficus, among which there is one sending forth roots which descend into the earth, giving support and nourishment to the numerous far-spreading branches, or sometimes encircling a palm with its stem, thus presenting the singular deception of palm-leaves growing out of the fig-tree. As may be supposed, the embrace in time proves fatal to the palm. A species of Annona also occurs here spontaneously, producing a fruit which in size and shape resembles the Cherimoyer, but bears no comparison with the latter as to quality. I often saw it cultivated in the warmer parts of Mexico, requiring a higher temperature than the Cherimoyer. It is, I believe, Annona lævigata (?); the native name is Anona.

"On the 23rd of February I returned from an excursion to the Rio Grande de Santiago, the largest stream in Central Mexico, taking its rise from the swampy plains between Lerma and Toluca, near the city of Mexico, and traversing a space of more than 600 miles in a north-westerly direction. The vegetation is in no respect different from that observed on the descent to San Blas; and the only objects derived from this excursion were an Epidendrum, an Oncidium, and another orchidaceous plant resembling a Catasetum in habit, but producing a flower-stem eight to ten inches from the apex of the pseudo-bulbs, which at its extremity is much branched. This species occurs exclusively on palms, and seems to flower during the rainy season.

"On the 7th of March I despatched a tin case containing the seeds collected about Tepic to Guadalajara, to be forwarded thence by diligence to Vera Cruz. On the 9th I sent off to Tampico the Orchids and Pine cones, occupying two chests.

"The verdant fields and pine-covered range of mountains at the back of the town Monteroy, form a pleasing contrast to the dried-up vegetation about Mazatlan. The predominating trees are an evergreen Oak (Quercus Californica), forming a tree thirty feet high, with a globular crown, and having the branches much distorted. It occurs principally in low but dry situations. The higher parts are occupied by Pinus insignis, a tree sixty to one hundred feet high, with a stem of two to four feet in diameter. This species is liable to vary much in the size of the leaves (which stand in threes) and in the cones, according to local circumstances. In close woods, a mile or two from the sea-shore, at an elevation of 200 to 300 feet, the leaves usually measure four-and-a-half to five-and-a-half inches, and cones four to four-and-a-half inches in length by two-and-a-half broad; towards the beach, where the trees are mostly one-sided—a defect caused by north-west winds, which blow for the greater part of the year—both leaves and cones diminish in size. These differences, which are too insignificant to establish even varieties of Pinus insignis, have given rise to the names Pinus tuberculata and radiata, which were, according to Loudon, collected by the late Dr. Coulter near the sea-shore at Monterey; that locality, no doubt, is Point Pinos, as it is the only habitat near Monterey where pines grow close to the beach; it is at the same time the place where I made the foregoing observations. In all situations the cones grow three or four together in a cluster, remaining on the trees several years after shedding the seeds; are pendulous, with the apex somewhat recurved; deformed, that is, the scales on one side are more developed than on the other, and enclose two winged seeds under each scale. The cones are about eighteen to twenty-four months in ripening.

(*To be continued.*)

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

ANNUAL flower seeds, as Clarkia, Collinsia, Schizanthus, Ten-week Stock, &c., now sown in small pots, well drained, and kept in a cool frame, or a spare corner in a cool greenhouse, through winter, will be suitable for turning out in the open borders at the end of March or in April. Such plants bloom early and fine, and they are early ornaments for the flower garden; and as they decline, the spring-sown plants are coming into bloom. Seeds of many kinds, now sown in the open border, generally survive the winter, and bloom vigorously early the next season. **Carnations**: the layers should be taken off, severing them off *at a joint* as near the root as possible. Only a few of the bottom leaves should be trimmed off to admit the compost to settle closely around the stem, and that no leaves may rot inside the soil, and be likely to damage the main stem. The compost in which to pot them must not be rich, or the plants will be likely to grow too vigorous, and become what florists term too gross. Equal portions of year-old turfy loam and leaf mould, with a small proportion of sand mixed therein, is rich enough, and of a dryish texture, and the plants keep healthy in it if otherwise duly attended to. They must have a liberal drainage; over the broken pot, &c., spread a portion of moss or turfy loam, in order to prevent the compost settling amongst the bits of pot, and to allow a free passage for the water draining away. The compost must not be sifted, but chopped, and in its rough state. In potting, place two layers in each pot. When potted, put them in a cool frame for about ten days, keeping the lights closed, and shaded from mid-day sun; this contributes to an immediate striking root afresh: afterwards they may be fully exposed in a sheltered spot, having a thick floor of coal-ashes or boards to place the pots upon, in order to prevent worms entering. **Pinks**: beds of them may still be made, and the earlier the more successful; dig into the bed four inches in thickness of old manure; do it a week or so before planting, and plant as early in the month as you can. **Pansies**: beds of them should be made for next spring bloom. Pot some of all the best kinds in small pots, to be placed in a cool frame during winter. If the sowing of the seeds of biennials, as Scabious, Canterbury Bell, Brompton and Queen Stocks, &c., has been neglected, they should be attended to as early as possible. **Verbenas**: runners should be potted in small pots, a third filled with potsherds, and the rest with good loamy soil, placing them in a close cool frame for ten days, shading from mid-day sun; after which gradually expose them to open air. Attention to them should be immediate. When placed in a cool frame or greenhouse for winter protection, they must be kept near the glass, and in a dry situation. Put in cuttings of all bed plants as early as possible, taking short, well-ripened shoots, as the very gross fleshy ones are not generally free to strike root, and very liable to damp off—Petunia, Heliotrope, Hemimeris (Celsia of some), Bouvardia, Cuphea, Salvia, Maurandia, Calceolaria, Pelargonium, double Ragwort, Anagallis, Fuchsia, &c. Bulbous-rooted plants, as Hyacinth, Crocus, Tulip, Narcissus, Guernsey Lily, Iris, &c., for early forcing, should be potted as soon as possible; if not in possession, they may now be obtained of the nurserymen and seedsmen. The double Sweet Violets should now be taken up from the open ground, and be planted on a bed in a frame or in pots, in order to have them in bloom by Christmas, &c. (See Articles in former Numbers.) Seedling Auricula and Polyanthus plants should be potted off as soon as large enough, and any old stock not already done. RANUNCULUS beds should now be prepared as follows:—The depth of soil to be two feet and a half, of a rich clayey friable loam, retentive of moisture, about six or eight inches from the surface to be a rich light loam of a sandy nature. Remove the whole of the soil with the remains of the dung given last year, and turn up the subsoil a whole spade in depth, breaking it well. If the beds are allowed to remain in this state for a day or two to sweeten the subsoil, it will be an advantage. Then place upon the subsoil a layer of cow-dung, at least one year old, four inches thick; then scatter over it the fine powder of new-slaked lime, to correct any acidity and destroy the worms. Then fill up with new light soil, taken from the surface of the old tulip-bed or potato-ground, which has been frequently turned to sweeten it. LILIES: Crown Imperials, Crocus, Narcissus, Snowdrops, &c.. are in large masses, and require to be divided; they should be done as early as possible, and replant immediately. LOBELIAS: offsets of, should be potted off, to have them well established before winter; or one or more large stock plant of a sort be potted entire, to furnish strong offsets towards spring. CHINA and TEA ROSES: cuttings of, strike readily now. MIGNIONETTE for winter blooming: see Articles upon, &c. SEEDS: many kinds will now be ripe; attend early to gather them. Pentstemon, Chelone, and similar border plants, should be increased by cuttings or parting the plants, or they often die in winter.

IN THE GREENHOUSE, STOVE, &c.

PELARGONIUMS, that were headed down, and have pushed shoots an inch or two long, should be repotted, taking away the greater part of the old soil, and repotting in new compost. Cuttings which are rooted should be potted off (see Articles upon). CAMELLIAS: thin the buds where numerous, which tends to preserve more certainly those left for blooming, and to have them more vigorous. Any desired to bloom by Christmas should be placed in the greenhouse. GREENHOUSE PLANTS: the general stock will require housing by the last week in the month, for if left out later they often turn brown by the operation of the cold air. Succulents should be taken in soon to save them from any excess of wet. CINERARIAS, in open beds, should be repotted by the end of the month, for winter blooming, &c. CAMELLIAS may now be grafted. CHRYSANTHEMUMS must be encouraged in every way to promote their vigour, by repotting, watering with liquid manure, &c., occasionally. CHINESE PRIMROSES should be similarly encouraged for winter blooming. If mildew appears on any plants, dust them with sulphur immediately. Camellias may be grafted; the operation may be performed with the greatest success by pursuing the method the French call "*graffe en placage,*" which is merely inserting that portion of wood that includes a bud and leaf cut longitudinally, into a corresponding cleft in the stock. The grafted subjects should be plunged in bottom heat, and kept covered for at least a month.

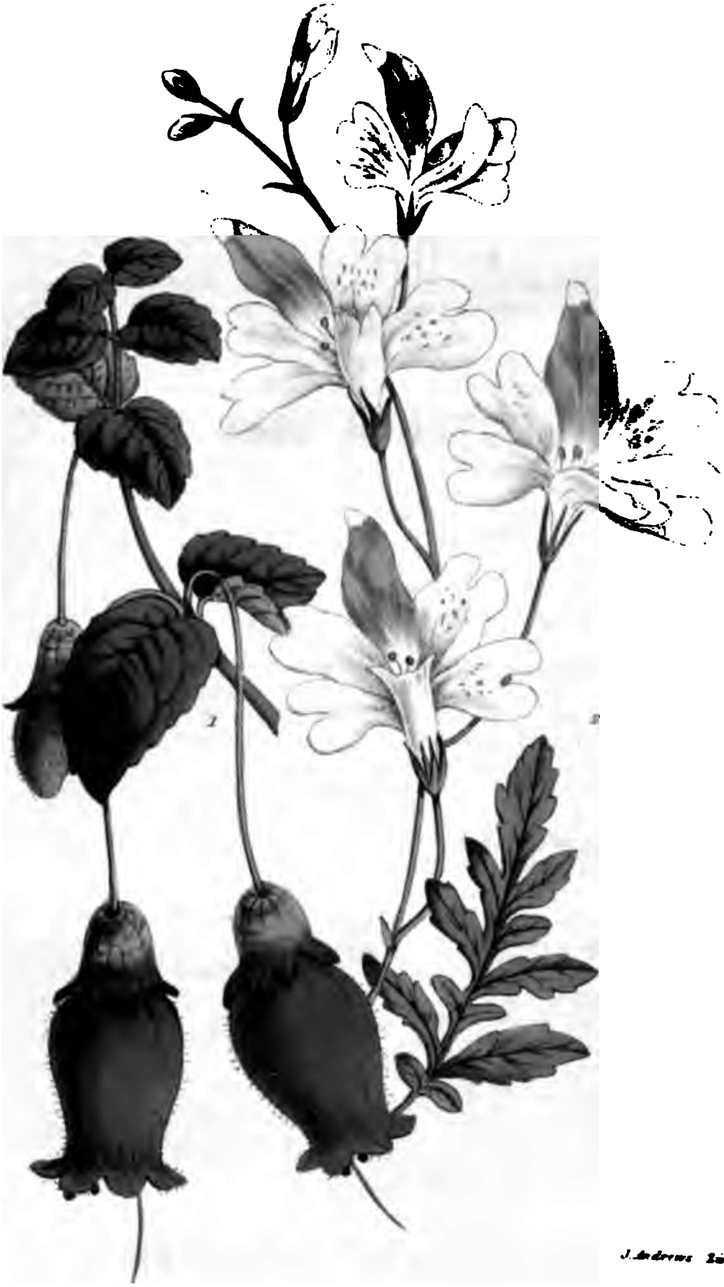
SHRUBBERY, &c.

When it is intended to remove large evergreen shrubs, &c., the coming season, it very materially contributes to success to have a deep trench cut round the plant at the size the ball is intended, and thus cut in the roots, which induces them to push lateral ones, and such readily strike afresh when removed. October and early in November is the best season for planting evergreens; the ground possesses some heat then, and promotes their more immediate establishment, and the air is cool and damp in a proportionate degree.

THE FORM OF THE TULIP.

BY MR. GLENNY, AUTHOR OF THE PROPORTIONS OF FLORISTS' FLOWERS, &C.

RECENTLY noticing some remarks on the form of the Tulip, inserted in this Magazine by a correspondent, I beg to call the attention of the readers to the simple fact that no writer on the Tulip ever hinted a word as to the form being circular or globular in any proportion whatever, not a solitary florist had even gone beyond saying "that it should be the form of a cup," and leaving the reader to decide what shaped cup it should be, until I in 1832, and often since that period, laid down as a principle, that the form should be from one-third to one-half of a hollow ball. And I also beg to call attention to another fact. The disingenuous manner in which other writers have actually pretended to claim originality when they insist that one-half of a hollow ball is the only true standard, and that Mr. Glenny is wrong about his third part. When those writers who found their credit upon what they purloin from others have been forgotten, my standard will remain as mine and mine only. For those people are seen through even now by old florists, and what does all they say amount to now, why to acknowledge that my standard of half a hollow ball is right, and to a denial that one-third is as good. I put this case. A Tulip is exhibited, exactly half a hollow ball, it is all you can wish for, the sun shines bright and warm on the room in which it is shown; gets highly heated in half-an-hour; the Tulip opens a little more, and forms only a third of a larger globe; and if the flower does not quarter, it is as much more beautiful, for its increased size and its more complete development of the marking, as it can be less by its being shallower. I consider all the miserable attempts to describe the same proportions in different words very contemptible, and such is the opinion of the leading enthusiasts in floriculture.



J. Andrews Zinco

Mitraria coccinea—2, Schizanthus retusus albus

OCTOBER, 1848.

ILLUSTRATIONS.

MITRARIA COCCINEA—Scarlet-flowered.

THIS most charming shrubby plant is a climber, growing four or five feet high, and quite hardy. It has been introduced into this country from South America by Messrs. Veitchs', and has bloomed in their nursery at Exeter. A specimen of it in flower was exhibited at the Horticultural Society's show the present season, and was much admired. It is a very valuable acquisition to our shrubs, and especially so in being an addition to our climbers. It highly merits a place in every pleasure garden, being easy of culture, blooming freely, and very ornamental.

SCHIZANTHUS RETUSUS ALBUS.

No doubt the greater part of our readers know the beautiful half-shrubby Schizanthus retusus; its rich orange and red flowers, borne in profusion, render it very ornamental, whether grown in the greenhouse or open air border. The variety we now figure is peculiarly handsome, more especially so when grown near the S. retuses, the contrast is very strikingly beautiful. It was raised by Mr. John Burridge, jun., of Colchester. It is readily increased by cuttings or seed.

Mr. J. G. Waite, seedsman, No. 181, High Holborn, London, who presented the drawing to us, can supply plants or seeds. It is worthy a place in every greenhouse and flower garden.

NOTES ON NEW OR RARE PLANTS.

Gmelina Rhreedii.

Verbenaceæ. Didynamia Gymnospermia.

A very tall growing tree-like, hot-house plant, which has long been in the collection of the Royal Gardens of Kew. The form of the flower is somewhat like a Mimulus, nearly two inches across, of a tawny-yellow with streaks of red. The inside of the tube is green. They are produced in a large terminal thyrsus head, and are very showy. It is an interesting plant. (Figured in *Bot. Mag.*, 4395.)

HOYA IMPERIALIS.

This noble-looking species was found in Borneo by Mr. Low, jun. A plant in bloom was exhibited at the June show, held in the Regent's Park Gardens, and which we noticed in our July Number. A fine figure of it is given in the Botanical Magazine for September. The flowers are borne in large, broad, trusses, having from six to ten in each; when all are expanded, the truss is eight inches or more across. A separate blossom is about three inches across, very thick and fleshy, of a purplish-chestnut colour, having the central staminal crown of a pale ivory white, glossy, which, in contrast with the other part of the flower, renders it very interesting, and when the fine pendant large trusses hang from the twining stems have a noble appearance. They are very fragrant in the evening and through the night. It is a climber of quick growth, a hot-house plant. The leaves are from six to eight inches long, and about half as broad, thick and firm.

JASMINUM NUDIFLORUM—NAKED-FLOWERED.

A native of China, sent to the Horticultural Society by Mr. Fortune; it blooms very freely in the garden at Chiswick, trained against a wall. The flowers are borne in profusion, but do not appear till the plant has lost its leaves. They are without scent, of a fine yellow colour. (Figured in *Pax. Mag. Bot.*)

SERICOGRAPHUS GHIESBREGHTIANA. (Syn. Aphelandra Ghiesbrightianum.)

Acanthaceæ. Didynamia Angiospermia.

A dwarf half-herbaceous shrub, requiring to be grown in the stove or a warm greenhouse, and be treated very similar to the Justicias. It blooms very freely during the winter months, when the numerous Justicia-like bright-scarlet flowers are highly ornamental. A separate flower is an inch and a half long. It requires plenty of pot-room, a free drainage, well syringing with soft water, and a good supply at the roots when growing, but in its state of rest just to be kept moist. It merits a place in every collection, especially where winter flowers are required. It may readily be procured, and at a reasonable price. (Figured in *Pax. Mag. Bot.*)

WEIGELIA ROSEA.

A well-executed figure of this charming hardy shrub is given in the Botanical Magazine. It blooms very freely, and beautifully in the open air in the border, or trained against a wall, during the early summer months. Its syringa-formed rose and white flowers, being a deep rose without and pale within, becoming white, are highly interesting and ornamental. It ought to be in every garden where shrubs are admitted, and can now be had at a trifling cost.

NEW CARNATIONS.

JENNY LIND (Merryweather).—A brilliant scarlet flake, of fine form.

SCARLET DEFIANCE (Haines).—A vivid scarlet flake, with a good white ground, and fine formed round petals.

BRILLIANT (Elliott's).—A rich scarlet flake, with a pure white ground. Petals of thick substance and fine form.

PRINCE ALBERT (Puxley's).—Scarlet bizarre. The scarlet and dark colours are rich, and upon a good white ground, fine form.

THOMAS HEWLETT (Holliday's).—Crimson bizarre. The colours are rich and very distinct, upon a clear white ground, and the form of first-rate excellence.

NEW PICOTEES.

DUKE OF WELLINGTON (Burroughs').—A pure white, with a fine red edging, large, and superb form.

LADY SMITH (Burroughs').—A pure white, with rich purple edging, excellent flower.

JULIET (May's).—A good white ground, with a deep purple edging.

JUNO (Matthews's).—A pure white ground, with a rich violet-purple edging, and fine formed petal.

PRIDE OF THE VILLAGE (Kirtland's).—A very pure ground, with a most distinct purple edging, and fine form.

PRINCESS (Grant's).—A pure white ground, with a very distinct carmine edging, and fine form.

MISS TURNER (Barringer's).—White pure, and its heavy edging of red, fine in colour, is very distinctive.

ELIZA (Staniland's).—Clear ground, with a very distinct purple edging, and fine formed flower.

PRINCE ALBERT (Marris's).—Clear ground, with a deep red violet-purple (heavy) edging, a large full flower.

JENNY LIND (Ely's).—Pure white ground, and a pretty light purple edging, fine shape.

The most perfect Picotees and Carnations we saw in the immense numbers exhibited at the London shows were—

Picotees.—Edmund's Jenny Lind, Burrough's Duke of Newcastle, Cox's Regina, Cocket's Victoria Regina, Marris's Prince Albert, Headley's Ariel, Holliday's Minerva, Barnard's Mrs. Barnard.

Carnations.—Brooke's Flora's Garland, Appleby's Prince of Wales, Ely's Lord Milton, Brabbin's Squire Meynell, Ely's Prince of Wales, Elliott's Duke of Sutherland, Strong's Duke of York, Cartwright's Rainbow, Duke of Sutherland, Mansley's Beauty of Woodhouse, Jackson's Squire Trou, Barnard's Duke of Roxburgh, Addenbroke's Lydia, Alpha, Hales's Prince Albert, Turner's William Penn.

NEW PINKS.

MARRIS'S ROSALIND.—A very beautiful sort, growing somewhat in the style of Headley's Duke of Northumberland, and equally smooth on the petals. The lacing is lighter than that esteemed variety, being a delicate light purple, and it will make a first-rate flower for exhibition. It is not yet let out.

MARRIS'S LADY JANE GREY.—This is a most lively and attractive variety, extremely constant in its lacing, which is heavy, and of a fine bright crimson. The white is good, and the flower will be prized both by florists and those who desire a striking and handsome sort for their flower borders.

GATLIFF'S TYRO.—A very handsome rose-petalled purple-laced flower. It is rather small, but when reduced to a single pod, it will be got in first-rate style.

BEAUTY OF HOME.—Rose petal, clear white and black. Very fine variety.

BLACK-EYED SUSAN.—Pure white, with a rich deep purple lacing, and eye, rose-leaved. The flower sent us was very excellent.

MARY (Ellis's).—White pure, with a perfect lacing of rich rose. Very superb.

BRILLIANT (Ellis's).—A pure white, with bright red lacing.

JENNY LIND (Read's).—White pure, with a rich deep purple lacing, rose-leaved. In every respect this was the best pink we saw last season.

NARBOROUGH BUCK.—White pure, with very dark edging, large flower.

WHIPPER-IN (Smith's).—White pure, with a rich rosy purple lacing.

HON. MRS. HERBERT (Keynes's).—White pure, with a rich deep purple lacing, highly spoken of.

Mr. EDWARD'S (Turner's).—White pure, with a fine rose edging, large, rose-leaved.

JENNY LIND.—(Marsden's).—Pure white, with a rich dark edging.

CRITERION (Marsden's)—Pure white, with a very fine purple edging.

ON WINTER BLOOMING OF MIGNONETTE.

To have these plants in perfection during the winter months, the first sowing should be made in the open ground about the end of July or beginning of August. These plants, by the end of September, will be strong and bushy, and should be removed carefully into pots with good drainage; for a week or so after potting they must be shaded from the sun. When fully established, place them in cold frames to protect them from rains and cold nights, but freely expose them to the sunshine during the day. As soon as they begin to show flower remove them into the greenhouse or conservatory, in which they will continue flowering till succeeded by the next crop, which must be sown in pots, well drained, or in those rustic pots or baskets described by me for Primulas, at page 229 (1847), in rich light soil. By sowing them in these pots the drainage is complete, on which depends the successful cultivation of this desirable little favourite during the dull, cloudy winter months. This sowing must be kept where there is a little heat, but only a little, or they will grow weak, and the leaves become yellow and drop off. This sowing may be succeeded by another, so that a regular succession may be kept up, care always being taken that the pots are well filled with drainage, and that they are not over-watered, which is the cause of their leaves turning brown, and the plants sickly, in which state we so frequently meet this plant. Although I recommend a little heat, it is only during the cold winter months, so that the plants may be kept continually growing; for if once checked by cold, they may as well be at once thrown away, as they will only disappoint the expectations of the cultivator. It is not yet an age since it first perfumed the British gardens, yet it has so far naturalised itself to this our changeable climate, as to spring from self-sown seeds, and, in many sheltered places, to stand our winters; thus conveying its delightful odour from the palace to the garden of the humble peasant.—*Gardeners' Journal.*

DISEASE OF PLANTS.

Several correspondents have recently sent us the leaves of both exotic and hardy flowering plants which have been affected by a disease similar to the Potato, it is, however, a fungi that they have been injured by. The Rev. Mr. Berkeley has paid much attention to the subject of the disease on the Potato and fungi in general, whose remarks are given in the *Horticultural Journal* and the *Gardeners' Chronicle.* We give a short extract on the subject in general.

"The decay" [in the Potato], writes Mr. Berkeley, "is the consequence of the presence of the mould, and not the mould of the decay. It is not the habit of the allied species to prey on decayed or decaying matter, but to produce decay—a fact which is of the first importance. Though so many other species have this habit these have not. The plant then becomes unhealthy in consequence of the presence of the mould, which feeds upon its juices and prevents the elaboration of nutritive sap in the leaves, while it obstructs the admission of air and the emission of perspiration. The stem is thus overcharged with moisture, and eventually rots, while every source of nutriment is cut off from the half-ripe tubers. It would be as reasonable to say, with our knowledge of the nature and habits of the cereal fungi, that bunt, or mildew, or the other allied diseases which affect corn, are the consequence and not the causes of disease. In favourable seasons they are not developed; in unfavourable seasons they spread like wildfire: in one sense, therefore, the atmospheric conditions are the cause, but merely as they stimulate into action the latent pest. The immediate cause of disease is the fungus which preys upon the tissues of the corn. So exactly, in the present instance, as far at least as the aërial portions of the plant are concerned, the Botrytis is the immediate cause of destruction. In some instances it may have been aided by unseasonable frost, but this has certainly not always been the case. The mould indeed would not have spread but from peculiar atmospheric conditions favourable to its growth. What these are it may be impossible to say, but it is a fact well known to every student of the extensive tribe of fungi, that their growth, and especially their numbers, depend more than all other vegetables on atmospherical conditions, or what Fries has happily called 'cosmica momenta.' Even the peasant knows this to be the case with Mushrooms. Dry and wet summers occur, and both are equally barren; while in other seasons, apparently but little dissimilar, they occur in the utmost profusion. A species will be most abundant for a year or two, and then for a period vanish entirely. It is notorious that this is the case in other parts of the creation, especially amongst insects, peculiar species of which sometimes swarm to such an extent as to baffle the naturalist. In the summer of 1826, for instance, Vanessa cardui existed in the greatest profusion in England, and it was traced by Mr. A. Way from England to Nice. The species of late years has been comparatively rare. There is nothing surprising then in the fact of the immense prevalence of a parasitic mould. No one wonders when the Hop grounds are ravaged by their peculiar mildew, because the cultivation of Hops is so limited; but if it were as universal and of as much importance as Potatoes, the ravages would equally excite attention. It is by these instruments, contemptible in the sight of man, that the Almighty is pleased sometimes to accomplish his ends. Instances, like that of the Hessian fly, will readily occur of the immense disproportion between the means and the end."

ON RAISING RANUNCULUSES FROM SEED.

BY G. L.

A CORRESPONDENT recently requesting information on raising the Ranunculus from seed, I forward the following remarks, which I have most successfully practised. I should feel much obliged by your inserting it in an early Number.

Ranunculus seed is to be procured from semi-double flowers; care should, therefore, be taken to save it from such as are possessed of good properties, viz., such as have tall strong stems, a considerable number of large well-formed petals, and rich good colours, chiefly preferring the darker, but not to the exclusion of the lighter coloured when their properties answer the foregoing description. The seed should remain on the plant till it has lost its verdure, and becomes brown and dry; it may then be cut off and be spread upon paper, in a dry room, exposed to the sun, that every degree of humidity may be exhaled from it, in which state it should be put into a bag, and preserved in a dry warm room till the time of sowing, otherwise it will be in danger of contracting a dampness, which will soon produce a mouldiness that will infallibly destroy it.

January is the proper time to sow the seed; and, in order to prepare it, it must be separated from the stalks to which it is connected in the following manner, viz.:—In the first place it should be taken out of the bag and spread thin upon paper, or a tea-tray, &c., and placed before a moderate fire till it is just warm and no more; the seed will then easily scrape off by means of a penknife, but great care must be taken to avoid scraping it off in lumps, or suffering any pieces of the stalk, dried petals of the flower, or other extraneous matter to be mixed with it, which would create a mouldiness when sown of very destructive consequence. When the seed is scraped in a proper manner, it will have much the appearance of clean coarse bran, with a little brown or purple speck in the centre of each cuticle, which is the kernel.

When the seed is thus prepared, it should be sown on a shallow frame, provided with glasses similar to those made use of for cucumbers and melons; the soil should have been previously taken out, three feet deep, and spread thin upon the ground till it has been perfectly frozen throughout, in order to destroy any vermin it may have contained. When the pit is filled up again with the frozen lumps of earth, it should remain till the whole mass has thawed and subsided to its pristine bulk, or nearly so; its surface should then be made perfectly smooth and even, and the seed sown upon it with the utmost regularity, in such quantity as nearly to cover it; the glasses should be placed over it immediately, and the frame kept closely covered with them for two or three days, till the seed begins to swell and soften; a little light earth should then be sifted upon it through a fine sieve, but not sufficient to cover it; this should be repeated once or twice a-week, till the greater part of the seed disappears. It is proper to remark that such seeds as happen to be covered deeper than the thickness of a half-crown piece will never vegetate, and must, of course, inevitably perish. It is necessary that the seed be kept moderately moist by gentle watering with soft water that has been exposed to the sun, but too much moisture is nevertheless injurious.

About the time that the plants begin to appear it is requisite to stir the surface of the earth with a pin just sufficient to admit air, and give liberty to the young plants to pass easily through; this operation should be very carefully performed to prevent breaking off the fibres, or raising and leaving any of the plants out of the earth, because one hour's sun upon such would certainly destroy them. After the plants are all up, and their two interior leaves appear, more air must be given, by having hurdles or latticework substituted for the glasses; waterings must be regularly continued in the manner before described, when the long continuance of dry weather renders it necessary; but fine warm showers of rain are always preferable when they happen in due time.

This kind of management is to be continued till the roots are matured and fit to take up, which is known by the foliage becoming brown, dry, and nearly consumed. The roots are to be dried and preserved in the usual way, and to be planted the same time as large ones in the autumn; the greater part, or such as have two or more claws, will bloom in tolerable perfection the following summer.

CULTIVATION OF FERNS.

Ferns have long been a neglected tribe of plants, and there is, perhaps, no other genus that has received such limited attention. The

Horticultural and Royal Botanic Societies are much to be applauded for their endeavours in bringing into notice this magnificent family; and, from the decided superiority of the specimens exhibited at the several horticultural exhibitions during the present year over those of the preceding, it appears that they are likely to engage the attention of numerous plant cultivators; and I have reason to believe that, in the course of another season, there will be greater competition amongst the growers of this much neglected family.

Where a large collection is grown, it is necessary that a house or pit should be solely appropriated for them, as they require a degree of moisture that would prove injurious to many other tribes of plants, with the exception of Orchidaceæ. Where Orchids are grown, it will add much to their grandeur, if a few handsome species of Ferns are introduced amongst them. They will also be found of service to the Orchids, as affording shade, which, to several of that lovely tribe, at certain seasons of the year, is indispensable. Many of the smaller exotic species of Ferns are quite at home, and will grow luxuriantly, if planted judiciously on the blocks and around the baskets of Orchidaceæ. I have grown many handsome species of Ferns on blocks of charred wood, and betwixt the clefts of decayed stumps of trees; and when grown in this manner, and suspended, they look exceedingly elegant. This system I have found best suited for several species of the Polypodium, Gymnogramma, Adiantum, Davallia, Dicksonia, Pteris, and several of the Lycopodiums. When grown in this manner, the fructification is seen to advantage, and presents an object that may well entrance the beholder's gaze. I have found many of the above species to grow beautifully when planted on a rough wall; and I have several times observed back walls and ends of plant structures covered in this manner, and presenting a most elegant appearance, which otherwise would have been very unsightly. When grown in pots, they require plenty of drainage, and to be grown in a soil consisting of sandy peat and loam, with a little bog-earth added for some of the species, taking care never to place them deep in the pots, and grown in a temperature suitable to the locality of the various species; for I have frequently observed Ferns growing in stoves that would have succeeded much better had they been grown in an airy greenhouse.

I know of no plant that is better adapted for planting amongst rockwork, or ornamenting the margins of artificial ponds or tanks for aquatics, as Ferns. Many of the British species, as well as many of the North American species, will be found extremely ornamental for this purpose, and deserve to be much more extensively cultivated than they are. Many species might be selected that retain the greater part of their fronds, and in the middle of winter snows, are full of verdure, and, in all stages of their growth, full of interest to the lover of Flora.

In winter, when flowers are scarce, a few vases filled with some of the handsome species of exotic Ferns will be found very acceptable in the drawing-room or conservatory; for what can appear more noble than a neat vase filled with a few of the handsome species of Gymnogramma, Polypodium, &c., with their gold and silver fronds, especially if a neat glass shade covered the whole?

A few years ago, I had charge of a fernery for the drawing-room, a description of which may interest the lovers of this family:—The stand was made of cast-iron, of an elegant design, and had a flat top moving on a pivot; on the top was placed a circular slab of marble, the diameter of which was 3 feet. On the upper surface of the slab, a groove of about an inch in depth was cut concentrically. A neat glass shade, of 2½ feet in diameter, and 3 feet high, fitted exactly into the groove, which was kept constantly filled with water, and which afforded a plentiful supply of moisture to the Ferns, which were planted upon rock-work, in a mixture of peat and a little loam, with a sprinkling of broken potsherds. In this miniature fernery several interesting species of Ferns were grown, and much admired by all who saw them.—(*W. Ferguson, Gardeners' Journal.*)

SKETCH OF THE VEGETATION OF CALIFORNIA.

(*Continued from page* 237.)

"On the dry banks of ravines, to the north-east of the town, the Californian horse-chestnut (Pavia Californica), is common. This extremely ornamental shrub or low tree rises to the height of twenty-five feet, is of a globular shape, and produces its fragrant whitish flowers of a delicate pink hue in great abundance on spikes twelve inches long; one of these spikes, which I had the curiosity to count, had more than 400 open flowers and buds upon it. Of shrubs, I observed Ceanothus thyrsiflorus very common in the pine-woods, and forming an evergreen shrub ten to fifteen feet high; a Sambucus, Lonicera racemosa, Spiræa ariæfolia, Rhus, 3 sp., Caprifolium Douglasii, a Diplacus, Garrya elliptica, a Rosa, Lupinus arboreus and ornatus; Ribes speciosum and malvaceum; Adenostoma fasciculata, a neat little evergreen shrub allied to Spiræa; Arctostaphylos, 3 sp., a Vaccinium, Gaultheria Shallon, an evergreen Prunus resembling the Portugal Laurel. Of annuals and perennials, a Hugelia, Delphinium, 3 sp., Leptosiphon androsaceus and densiflorus; Collinsia bicolor, a Convolvulus, a Malva, Lupinus succulentus and densiflorus; a Castilleja, an Œnothera, a Chironia. Of bulbs, Calochortus luteus, Cyclobothra alba, Brodiæa congesta, Calliprora flava, Hesperoscordum lacteum, and a Zygadenus called Amole, of which the bruised roots serve as a substitute for soap.

"On June the 22nd I left Monterey for the mission of Santa Cruz. Santa Cruz is across the bay, due north, of Monterey, and at a distance of sixty miles by land, whilst by water it does not exceed twenty-five miles. Passing along the sea-shore over the plains, which present the same vegetation as about Monterey, we arrived in the afternoon at the mission, after a gallop of seven hours. The mountains of Santa Cruz are well wooded with Taxodium sempervirens, called by the American settlers redwood or bastard cedar. In close forests it grows to an enormous size, averaging 200 feet in height, with a stem of six to eight feet in diameter, which is as straight as an arrow, and clear of branches up to sixty or seventy feet. One tree, that is termed by the Americans 'the giant of the forest,' is 270 feet high, with a stem measuring fifty-five feet in circumference at six feet from the ground. The bark of the redwood is from six to twelve inches thick, reddish and smooth; the timber is of a beautiful red colour, like pencil wood, fine, close-grained, light, but brittle; it is well adapted for in and out-door work, as the boards when seasoned do not warp, nor is it attacked by insects. Large quantities of timber are annually exported to the Sandwich Islands; 1,000 feet of one-inch boards, delivered on the beach at Santa Cruz, are worth 8*l.* Some fine trees of Abies Douglasii are found in the mountains of Santa Cruz; they do not form masses of themselves, but are thinly scattered among the redwood trees, with which they vie in size. The Mountain Oak (Castanea chrysophylla?) also occurs here, forming a tree fifty feet high; of a pyramidal shape, with persistent lanceolate leaves four inches long, serrulate on the margin; below they are covered with a rusty, yellowish down, which in the young leaves also covers the upper surface. The fructiferous catkins are produced on the points of last year's wood, and do not exceed two inches in length, whilst the catkins on the young wood are from four to five inches long, and sterile. The nuts, or rather acorns, are covered, in an unripe state, with down, and enclosed in an open cup, which on the outside is clothed with coarse scaly hairs. The Mountain Oak grows invariably in close shaded woods, and seems to be widely dispersed over the country west of the Rocky Mountains. Some Indian tribes eat the acorns either raw, or make a sort of bread of them. On the outskirts of the woods I observed Arbutus procera fifty feet high; a Lauraceous tree with linear light-green leaves of nearly the same dimensions; two species of Ceanothus; a Corylus, a Spiræa, a Solanum, and Zauschneria, the latter with scarlet flowers like a Fuchsia.

" On July the 2nd I returned to Monterey. The few days of absence produced a great change even in the vegetation; the fields and woods, which before were covered with flowers, are now gradually drying up, from the total absence of rain during the summer months; even the bulbous plants had, during that time, shed their flowers and ripened their seeds. Crossing the wooded heights near Monterey, I arrived at Carmel Bay, after an easy walk of two hours; here I found a Diervilla, Cupressus marcrocarpa, attaining the height of sixty feet, and a stem of nine feet in circumference, with far-spreading branches, flat at the top, like a full-grown cedar of Lebanon, which it closely resembles at a distance; Eschscholtzia crocea, E. Californica, Platystemon Californicum, a scarlet Castilleja, a Mesembryanthemum, resembling M. rubrocinctum; a Cheiranthus, Stenactis speciosa, an Echeveria, Abronia rosea, and A. mellifera. These two species, the former with pink, and the latter with orange flowers, are spreading on the sands near the sea shore, and delightfully scent the air with their perfume towards evening.

" Another excursion, which I made to the Rancho de Tularcitos, led over the mission of Carmel. Following up the narrow valley of the Carmel river, I entered a beautiful wood of alders, willows, and plane-trees, some of the latter attaining the height of eighty feet, and twelve in circumference. Of herbaceous plants, I observed two species of Solidago, Mimulus cardinalis, a Labiate plant, an Asclepias, an annual, with an extremely powerful smell, which, if inhaled in excess, produces bleeding at the nose. Of shrubs, a half-climbing Caprifolium, with small dingy flowers; a Clematis, a species of Cercocarpus, and, on rocky ground, a patch of Berberis Aquifolium. The sides of the mountains, which attain no great elevation, are thinly covered with oaks. The higher parts, near the Rancho de Tularcitos, are occupied by Pinus macrocarpa, which rise to the height of eighty to a hundred feet, with a stem of six to eight feet in circumference. The larger trees had not yet ripened their cones, but the smaller ones, of twenty to thirty years' growth, ripen theirs at different periods, and furnished me with a few cones. On my return thence, over El Toro, a high mountain, destitute of trees or shrubs, but thickly covered with wild oats (Avenæ species), I found, on the north side, in a ravine, a few small trees of Pinus Sabiniana, the highest of them not exceeding thirty feet. In this situation they appear to produce their cones when yet very young. Some trees, measuring from eight to ten feet in height, and of as many years' growth, had cones on them, which, like the foregoing species, seem to ripen about November.

"On August the 23rd, I embarked on board the barque Joven Guipuzcoana, whose owner, Don Jozé Antonio Aguirre, invited me to take a trip with him up to the Bay of San Francisco. On the following day we anchored off Santa Cruz, where the ship was to remain a day or two. I took advantage of this delay, and made an excursion to the mountains, in a different direction from that visited before. Passing through a copse wood, composed chiefly of Pavia Californica, Quercus Californica, Ceanothus thyrsiflorus, a Corylus, Rhus viride, called Yedra, and justly dreaded by the inhabitants for its poisonous properties, I entered a beautiful pine-wood. The leaves of this species of pine stand in threes; are longer than the cones, usually eleven inches in length; cones five inches long, by two and a half at the broadest part, of a reddish brown, the centre of the scales terminating in a small sharp point, bent downwards. The trees rise to the height of a hundred feet, with a stem three to four feet in diameter, producing the cones in clusters of three or four, which ripen towards September, or in about eight months from the time of flowering. This handsome species of pine, which appears to be new, I have named, in compliment to the late secretary of the Society, George Bentham, Esq., Pinus Benthamiana.

"Another kind of pine that I found within a few hundred yards of the foregoing species, is, probably, the doubtful and little known Pinus Californica; the trees seem to be of slow growth, and do not attain any great height, seldom more than twenty-five feet by eight inches in diameter. The leaves are in bundles of three, four and a half inches long; cones, five to five and a half inches long by two broad, the outer surface curved, the inner straight, scales on the outer surface more developed, enclosing two small, flat, winged seeds. The cones are only produced on the main stem; when ripe, they are of a light-brown colour, and stand off at nearly a right angle; when old, of a silvery grey, pressing firmly upon the stem, and remain on the trees for a series of years without opening or shedding their seeds.

"On August the 28th, the barque got under weigh for Yerba Buena.

"The vegetation about Yerba Buena is poor; the sand-hills that surround the town, and which extend for several miles into the interior, are but thinly covered with brushwood of oak (Quercus Californica, Ceanothus thyrsiflorus, Rhus, 'Toyon,' a Prunus, and a Baccharis).

"On September the 10th, I went across the bay to Sausalito. The face of the country about Sonoma and San Miguel is perfectly level towards the bay, and capable of great agricultural improvements. Several species of oak (Quercus) thrive well in the fine black vegetable mould, and are disposed into large irregular clumps, giving the country the appearance of an immense park, enlivened by numerous herds of elks and antelopes. A ridge of mountains, which rises at a short distance from San Miguel, is thinly scattered over with oaks, and a few Abies Douglasii interspersed. No other kinds of pine occur here. In the shaded dells I found a Viburnum, Euonymus, and a large-leaved Calycanthus in seed."

DOUBLE STOCKS.

In one of the journals or periodicals for the present year, one of your red-hot theorists recommends single Stocks to be placed near double ones, that they may be inoculated by the very few anthers that appear occasionally among the said double Stocks; and, like a good many more who have observed particular facts and not considered the circumstances, he jumps at conclusions without any reason to guide him. He has always saved seed from single Stocks grown among a great many double ones, and always found a large average of them come double; therefore he says, or rather writes, If you want good double Stocks, plant a single one among a great many double ones, and you will obtain double. There seems, to ordinary people, good reasoning in all this; but nothing can be more fallacious. Another says, unless double Stocks grow near single ones, you cannot have double Stocks from the seed: this is equally erroneous. The growing of double Stocks near single ones does not in the least degree affect them; but there are facts which, being connected with other facts, explain the whole mystery. My neighbour grows a good many things very carelessly, and nothing very good; he reads something about selecting seed from single Stocks that have grown near double ones. Now, I have been very choice of my Stocks for years, and have some years been unable to save seed, for want of single ones to take seed from, and especially of a double white sort, which is called by many different names, but which has more than once bloomed all double. However, I have always a good stock of seed, for it will grow some years old, and I save all I can, so that if I miss a season I go back to other savings. My neighbour never could get me to give him my seed, but I never objected to giving him or anybody else Stocks as soon as I could see that they were double. This just answered his views, and, accordingly, one year he placed one of his single Stocks amidst a little forest of my double ones. He had carefully potted some on purpose, and he had taken some care of the colours; and there could be no doubt that he had, as well as he could, completely hemmed in his single Stocks with double ones of the colour, or near it, in several different parts of his garden. He had also taken the precaution of removing all the other single ones from his garden. Some of his neighbours, equally jealous of my Stocks, besought him, while they were growing, to spare them a pinch of his seed; and many were the promises he made, and, to do him justice, performed; but not a double Stock came out of the whole number of growths. This put the theory of double Stock growing, by placing single ones among the double ones, quite on one side. I had all along laughed at his notion, and the next year I offered to let him plant a single Stock in every one of my beds of double ones, or rather mine as they came, for I had single as well as double in a general way, although the double so greatly preponderated. This he availed himself of, with no better success than before; and he had to deplore that half-a-dozen scribblers had deceived him. But I told him, as I had told others long since, that as the double Stock had no organ of generation, or, at least, very rarely could any be found, the proximity of a single one to a whole thicket of double ones would have no effect; and, to convince him, we planted our single Stocks out in the kitchen-garden, and the seed from it was just as good, and brought flowers just as double, as if it had been grown among them. The truth is, that the doubling of Stocks is a habit, and the few single ones that come among what are called good sorts, partake strongly of the habit; and it is from these alone that seed can be got to produce double flowers. If the seed be mixed, such as the seed bought at the shops, you may save seed from the very few single you happen to get, and yet be as wide of the mark as possible. I have seen the seed saved from German Stocks, when there was not more than one single to ten double, and their produce the next year nearly all single. The fact is that the single ones were not from the same seed as the double ones, and therefore, although they came among the double Stocks from Germany, their seed had not been saved from the same race at all; so that nobody is safe from this adulteration until by a lucky chance they get a hit with their own seed, or somebody's else that is given to them. I saved seed of all the leading German colours, and saved the whole separately. The first season I had it there was but one sort that came good and double, and this I kept saving for years. It was three years before I got another colour in good order, though I sowed imported seed every year. I therefore conclude—

First,—That the proximity of double ones would not have the least effect upon the seed of single ones placed there.

Second,—That the disposition to go double is a confirmed habit, and the seeds of the single ones that escape going double has all the character and habit inherent.

Third,—That to keep up the stock well it is never safe to sow all the seed, but that you must expect, now and then, to miss the seed altogether.

Fourth,—That the disposition to go double may be sometimes seen in a single stock with one or two extra petals, or the petals broader than usual, or inclined to crumble, but that these indications are not at all necessary when you are saving seed from your own stock which is already in a good train.

When you get into a good strain you may keep up a double habit for years, and even lose the sort for want of single ones to perpetuate them; but if you sow from single ones which have not the propensity to go double, you may work just as many years before you get a double one, for they just as obstinately come single. Now, the German Stocks are for the most part carefully saved, but there or here they will put inferior seeds to adulterate them; and, therefore, when you fancy you are saving the same breed of seed that the Germans came from, you may be only saving seed from a common single kind that never had a disposition to go double—one from the seed put in to increase the quantity; and it is this that makes the chances of double flowers from among the seed saved by the regular seedsmen exceedingly small. They save indiscriminately according to the colour; but, when you cannot depend on the seed, buy all from one stock; look out for those seedlings only that have very broad petals, or five petals instead of four, because this is a sure indication of a disposition to go double. The only reason I can discover for people fancying that the double Stock influences the seed is this: where you see good Stocks, and very few single, and all the seed is from one batch, the seed of the single is sure to be good; but if the single ones among the double had been planted by themselves a mile off, the seed would be just as good.—*Horticultural Magazine.*

ON THE CULTURE OF THE SCARLET LOBELIA AND CYPRIPEDIUM INSIGNIS.

BY A SUBSCRIBER.

CAN you inform me of the proper treatment of the Scarlet Lobelia? How it is to be kept in winter, when to be divided, and when to be planted in the open borders. Favour me also with the proper treatment of Cypripedium insignis, which invariably used to flower with me, but since I have changed my gardener, has not done so for two years.

[The method we adopt very successfully is as follows:—When the plants have done blooming in the open border, they are taken up entire with a ball of earth, either potted in that entire state, or placed side by side in a wooden box about six or eight inches deep; as soon as this is done, they are watered well to settle the soil to the roots. The pots or boxes are then placed in a cool part of the greenhouse, where it is dry, or in a dry pit frame. During the time from this operation to the middle of January, they have only as much water given as will barely keep the soil moist. If this is not attended to, the roots will be in danger of rotting. At this period the plants are placed in a higher temperature to start them, and when the offsets appear strong enough, which is by the end of February, they are divided singly, potted into large sixty-sized pots, and their growth promoted in moderate warmth. As the pots get filled with roots, they are repotted into forty-eight-sized pots, in a rich compost. By the first week in May they are a foot high, or more, and are planted out entire in the beds or borders, having a rich compost upon a dry substratum; but during their season of growing they require a liberal supply of pond water. In this way we have grown the L. fulgens, fulgens multiflora, propinqua, splendens, &c., from three to four, or even more, feet high. We find that it is better not to divide the offsets from the parent plant at the autumn taking up; in order to get them to root singly, more warmth and moisture is required than they like at that late period, in autumn, but being kept in unison with the parent plant, they have sufficient support with a little water, &c., to sustain them properly, and they readily begin to push root in January, and by following up the process above stated, the plants flourish continuously. Plants grown in pots during the summer season we treat in the same way, as it relates to being kept rather dry in winter, and in a cool part of the greenhouse, &c.; dividing the offsets in February, &c. When the offsets are divided from the parent in autumn, and then potted singly, they take up more room, and in proportion to quantity an increased attention in culture through winter.]

SUPERB INDIAN AZALEAS.

In our Number for last June, we inserted a descriptive list of all the best Indian Azaleas that were exhibited at the floral shows in and around the neighbourhood of London. A list of these lovely flowers was very much needed by our country readers who had not the opportunity of attending those meetings, or of visiting celebrated nurseries or private collections, in order to assist them in making selections. To render the descriptive list still more useful, we now insert the very best of those we saw in nurseries and private collections that had not been noticed in our list in June.

Albertii.—A bright rosy-scarlet, with a very distinct blotch of crimson and crimson spots around it. Flower large and very showy.

Mutabilis.—A very neat lilac colour, particularly pretty.

Optabili.—Lilac with a darker blotch and spots; very pretty.

Rubra elegans.—Rich orange scarlet, with a dark blotch; very handsome.

Officinalis.—A light scarlet shaded with red, and having a dark blotch. The petals are of firm substance; very handsome.

Violacea elegans.—A beautiful violet colour, spotted with a darker colour. The flower is nearly four inches across; very distinct.

Corallina.—Semi-double bright red, with a dark blotch.

Aurantia-lucida.—Violet, spotted numerously with an orange red colour; very pretty.

Muricata.—A beautiful violet-purple, with a very distinct crimson blotch.

Aristata major.—A pretty pink, with deeper coloured spots. Very good form.

Semiduplex-striata.—Rosy-flesh, with the back part of the flower streaked with white. A very profuse bloomer.

Trotteriana.—Pink shaded with rose, and a rich crimson blotch and spots. Flower large and showy.

Concinna.—A violet-crimson, with deeper coloured blotch and spots. Handsome.

Rosea superba violacea.—Rose, with shades of violet. A very large handsome variety.

Elata.—A very bright rose, having shades of lilac. Very showy.

Semi-duplex maculata. Pretty pink, with crimson spots. Very showy.

Conspicua-purpurea.—A bright light purple, with a very dark large blotch and spots. Very fine and showy.

Cruenta-elegans.—A rich orange-red; very pretty.

Aurea-majestica.—Buff, with yellow blotch and spots.

Purity.—A very fine pure white flower.

Woollerii.—Violet and crimson, with darker blotch and spots. Very pretty.

Tenella.—A very neat round petalled flower; pink, with a crimson blotch.

Congesta-elegans.—A very pretty orange-red colour.

FLORAL EXHIBITIONS.

HORTICULTURAL SOCIETY.

Sept. 5.—Of subjects of exhibition, Mr. Mylam, gardener to S. Rucker, Esq., sent a small collection of Orchids, consisting of Phalænopsis grandiflora most beautifully flowered; a capital specimen of the large blossomed variety of Miltonia candida, having 13 flower spikes; Dendrobium formosum, equally well managed; and a curious Oncidium called macranthum, pretty, but not so much so as it was expected it would prove. A Knightian Medal was awarded for the Phalænopsis.

Messrs. Veitch, of Exeter, sent Dendrobium triadenium; a variety of the charming Saccolabium Blumei, from Moulmein; and a specimen of their Java Rhododendron, together with a coloured drawing of its yellow variety called aureum.

Mr. Bunney, of Stratford, received a certificate of merit for a nice specimen of Dendrobium formosum.

A Banksian Medal was awarded to C. Webb, Esq., of Clapham, for a beautifully flowered plant of the variety of Stanhopea graveolens called venusta, along with which was also a fair specimen of S. Wardii. The latter variety of Stanhopea, together with S. graveolens (both exhibited under wrong names), was also shown by Messrs. Rollisson, of Tooting, who likewise sent Allamanda grandiflora, cathartica, and two imported kinds (the names of which which were not given), and a nice specimen of the brilliant red flowered Cape Heath, called Cerinthoides coronata. A certificate was awarded for the Heath, which is one of the handsomest of autumn-blooming kinds.

Messrs. Garraway, Mayes, and Co., sent a variety of Miltonia spectabilis, in which the light petals of the species were exchanged for purple ones, rendering the flower what is called self coloured. A certificate was awarded it.

Mr. Groom received a Knightian Medal for nine specimens, three of Lilium lancifolium album, and six of L. l. speciosum, from his fine collection of these magnificent Lilies, which are now in flower at Clapham. It was stated that in Belgium these Lilies are plentiful in every cottage garden, and being perfectly hardy, it was anticipated that they would no doubt soon find their way abundantly into those of our own country, to which they would prove great ornaments at this season.

From Mr. Green, gardener to Sir E. Antrobus, Bart., were Mr.

Backhouse's Achimenes venusta, Leschenaultia splendens, and a finely flowered specimen of the beautiful Dipladenia crassinoda. A certificate was awarded for the latter.

Mr. Cuthill, of Camberwell, showed a pretty pink flowered Cyclamen, the same as C. Neapolitanum; and Mr. Charlwood, of Covent-garden, sent Gladiolus Brenchleyensis, a brilliant red variety raised by Mr. Hooker, of Brenchley.

Of Fruit, Mr. Iveson, gardener to the Duchess Dowager of Northumberland, sent two ripe specimens of the Nutmeg (Myristica moschata); both had split, and showed the beautiful red interior—one, the smaller, into two halves, the other into four valves or quarters, a circumstance rather unusual with this fruit, which seldom divides itself into more than two. From the same garden also came ripe fruit of the Allspice (Myrtus pimenta), and a plant of Echites Franciscea, a Brazilian species, purple with a white eye; the flowers, however, were so much injured by travelling, that no correct idea of their beauty could be formed.

Of miscellaneous objects, Mr. Hamilton, of Cheapside, showed a contrivance for supporting Hyacinths when the latter are grown in glasses. It consisted of pierced rings, through which wires were passed upwards to support the tops, and downwards into the glasses to keep the apparatus steady.

From Mr. Yexley, of Merton, was a sample of cloth (waterproofed by some oily or resinous substance), which was stated to be better adapted for covering greenhouses and frames in winter than Russian mats, a fact which was corroborated by a gentleman present, who said that he had tried it last winter and had found it to answer perfectly. It was mentioned that a trial was about to be made of it in the Society's garden.

J. H. Barchard, Esq., of Putney Heath, sent a Palm leaf, exhibiting a very bad case of burning, occasioned by the employment of British sheet glass in his conservatory.

From the garden of the Society were various Orchids, among which were the new Mexican Miltonia Karwinskii, and Spathoglottis Fortuni, a Hong Kong species; also six varieties of Achimenes, of which one named candida, a small, white-flowered sort, was produced to show that all the species of this usually handsome genus are not beautiful, nor even desirable; and a specimen of the new Nemophila speciosa, a large white-blossomed variety, with a blue or rather violet spot on the tip of each petal; together with a pink-flowered Anemone, a hybrid between A. japonica and vitifolia. From the same collection also came the small, round, black fruit and leaves of the Morelle de Guinée, a name under which seeds were sent to the garden by M. Vilmorin, of Paris, last spring, and from which the specimens exhibited were raised. The common Morelle of the French is the Black Night-shade (Solanum nigrum), which is generally considered to be poisonous. The Morelle de Guinée differs from the common Morelle in having much larger leaves even when grown in the same kind of soil. The leaves of both sorts, it appears from the following extract from "Le Bon Jardinier" of 1846, may be eaten like Spinach.

"The Morelle (Solanum nigrum) is an annual, growing naturally in Europe and America. It has hitherto been considered a dangerous plant in France, where, consequently, it has been treated as a noxious weed; but it appears that the leaves may be used as Spinach. Although it belongs to the Solanum tribe, it is, perhaps, not unwholesome. It is extensively used in the Mauritius under the name of Brède, and likewise in the West Indies under that of Laman. Many of the Creoles who came to France searched for the plant and ate it without experiencing the least inconvenience. This plant may, therefore, afford for horticulturists another resource for the summer season, and can be easily increased by seeds, sown where the plants are intended to be grown, in any open space in March, April, and May." Notwithstanding, however, this favourable account of a plant which has always been regarded as a poison, due caution was advised in testing its qualities.

ROYAL SOUTH LONDON FLORICULTURAL SOCIETY.

The last exhibition for this year was held on September 13, in the Surrey Zoological Gardens. It being what is termed the Dahlia meeting, this noble and unrivalled ornament of the flower garden was on this occasion pre-eminently attractive, and upwards of 15,000 visitors were assembled. We have annually attended all the great Dahlia exhibitions which have been held in the country during the last 20 years, but the perfection of the specimens shown on this occasion was much beyond any we had previously seen. The number, too, of the flowers exhibited was above 3000. The seedlings of 1847 and 1848 were very numerous, and a large tent was appropriated solely to this most interesting portion. Dense crowds surrounded the long tables to view the stands of flowers, especially the fancy class and the seedlings, and such was the pressure, that it was with much difficulty we could get near enough to inspect the flowers, so as to ascertain their respective merits.

Very liberal encouragement had been given by nurserymen and amateur cultivators, by handsome subscriptions to increase the value of the prizes, and the results must have given them much satisfaction.

In the *Amateurs' Class*, for 24 dissimilar blooms the first prize was awarded to J. Howard, Esq., of Burnham, whose stand contained Gloria Mundi, Springfield Rival, Mrs. Anderson, Beeswing, Scarlet Gem, Essex Triumph, Raphael, Marquis of Aylesbury, Lady St. Maur, Captain Warner, Princess Radziwill, Louis Philippe, Miss Vyse, Shylock, Queen of Roses, Mynn, Conspicua, Captivation, Essex Bride, Nonpareil, Sarah Drummond, Competitor, Box, and Yellow Standard; 2nd. Mr. Robinson, of Pimlico, for Beeswing, Privateer, Marquis of Worcester, Yellow Standard, Lady St. Maur, Athlete, Caractacus, Louis Philippe, Cardinal Ferretti, Widnall's Queen, Scarlet Gem, Miss Vyse, Mrs. Shelley, Cassandra, Captain Warner, Berryer, Essex Triumph, Toison d'Or, Conspicua, Lillywhite, Beauty of Sussex, Fulwood Scarlet, Nonpareil, and Shylock; 3rd. Mr. Proctor; 4th. Mr. Hopkins; 5th. Mr. James; 6th. Mr. Cook; 7th. Mr. Collison; 8th. Mr. Black. In the same class, for 12 dissimilar blooms, the 1st prize was awarded to Mr. Pope, of Chelsea, whose stand contained Nonpareil, Delicata, Shylock, Mrs. Shelley, Essex Triumph, Captain Warner, Box, Yellow Standard, Princess Radziwill, Queen, Louis Philippe, and Gem; 2d. Mr. Squib, Southampton, for Mynn, Delicata, Berryer, Gem, Captain Warner, Queen of Perpetuals, Beeswing, Essex Triumph, Shylock, Miss Vyse, Louis Philippe, and Victorine; 3rd. Mr. Noke; 4th. Mr. Wildman; 5th. Mr. Holder; 6th. Mr. Burgess; 7th. Mr. Firth; 8th. Mr. Miller. In the same class, for the best six fancy Dahlias, the 1st prize was given to Mr. Miller for Madame Wachy, Hermione, Emperor of Morocco, Bouquet de Brueil, Judy, and Roi de Points; 2nd. Mr. Hutchman, for Bouquet de Brueil, Master G. Clayton, Hermione, Madame Wachy, Miss Watson, and Adolph du Bras; 3rd. Mr. Pope; 4th. Mr. Edwards; 5th. Mr. James; 6th. Mr. Holder: and for the best six new Dahlias, let out in 1848, the 1st prize was awarded to Mr. Pope, Chelsea, for Walter Hilson, Nell Gwynne, War Eagle, Gem, Golden Fleece, and Shylock; 2nd. Mr. Howard, of Burnham, for Hero, Crocus, Golden Fleece, Canary, Shylock, and Gem; 3rd. Mr. Collison; 4th. Mr. Cook; 5th. Mr. James; 6th. Mr. Black.

In the *Nurserymen's Class*, for the best 24 Dahlias, the 1st prize was awarded to Mr. C. Turner, of Chalvey, whose stand contained Beeswing, Nonpareil, Mrs. Anderson, Golden Fleece, Essex Triumph, Andromeda, Captivation, Yellow Standard, Captain Warner, Miss Vyse, Richard Cobden, Princess Radziwill, Sir R. Peel, Toison d'Or, Black Prince, Privateer, Louis Philippe, Gem, Box, Conspicua, Shylock, Mynn, Berryer, and Queen of Roses; 2nd. Mr. Bragg, of Slough, for Admiral Stopford, Box, Venusta, Lady Leicester, Prometheus, Nonpareil, Standard of Perfection, Princess Radziwill, Essex Triumph, Competitor, Miss Vyse, Delight, Marquis of Aylesbury, Toison d'Or, Scarlet Gem, Yellow Standard, Louis Philippe, Beeswing, Athlete, Bermondsey Bee, Marchioness of Cornwallis, Mynn, Queen of Roses; 3rd. Mr. Cutter; 4th. Mr. Keynes; 5th. Mr. Barnes; 6th. Mr. Drummond; 7th. Mr. Mitchell; 8th. Mr. Hunt. Fancy Dahlias in stands of 12 varieties: 1st. Mr. Turner, for Freund Schmidt, Picotee, Madame Wachy, Triomph de Magdeburgh, Vicomte de Ressiquer, Emilie Lehmann, Dulcinea, M. Chereau, Jenny Lind, Emperor de Moroc, Hermione, Master G. Clayton; 2nd. Mr. Harrison, Richmond, for Surprise, Dulcinea, Tricolor Nouveau, Adolph du Bras, Mrs. Shaw Lefevre, Remembrancer, Madame Wachy, Master G. Clayton, Mirocolant, Jenny Lind, Œillet parfait, and Emperor de Moroc; 3rd. Mr. Bragg; 4th. Mr. Keynes; 5th. Mr. Barnes; 6th. Mr. Cutter. The extra prize offered by Mr. J. G. Waite to nurserymen for the best six Dahlias let out by the exhibitor was awarded to Mr. Turner, of Chalvey; and the contest for the seedling sweepstakes by Messrs. Collison, Bragg, and Co., Keynes, and Turner, was decided in favour of the latter.

Of SEEDLINGS: 1st class certificates were awarded to Mr. Turner, of Chalvey, for Mr. Selden, a light lilac purple; the same for a flower called Grenadier, a deep red; Dreadnought, Mr. Collison, of Bath, crimson maroon; Fearless, Mr. Barnes, Stowmarket, a flower rather novel in colour, being a bright lavender, large, and finely formed; Duke of Wellington, Mr. Drummond, a light, orange scarlet, novel in colour, a promising variety; Lamartine, Mr. Taylor, yellow, slightly tinged with red; Victoria Regina, Mr. Keynes, white, mottled with lilac; Duchess, Mr. Bushell, white; Queen of Yellows, Mr. Harrison, a fine rich colour; Queen of the East, Mr. Barnes, blush.

Fancy Seedlings.—To J. Howard, Esq., for Miss Jane, crimson maroon, with white tip; Rainbow, Mr. Keynes, red, with white tip; Mrs. Stanley, Mr. Mitchell, light crimson maroon, white tip; General Cavaignac, Mr. Hunt, crimson maroon and white.

REMARKS ON THE DOUBLE DAISY (BELLIS PERENNIS.)

BY MR. PETER MACKENZIE, GARDENER AT WEST PLEAN, NEAR STIRLING.

I READ with much pleasure the remarks on the double-flowered Daisy (Bellis perennis), by a clergyman's daughter, in the FLORICULTURAL CABINET for last July, and they not only afforded me present gratification, but induced me to take up my pen to contribute some further remarks in praise of this pet flower of mine.

The Daisy, as the poet says, "never dies;" it was once held in high esteem. We are informed that this simple-looking flower was deemed one of great renown, and in England was called either Herb Margaret or Day's Eye, and it still bears the name of Marguerite in France. It was the device of the unfortunate Margaret of Anjou, and when that queen was in prosperity her nobles wore it in their hair, or had it embroidered on their robes. That noble-minded woman, Margaret of Valois, the friend of Erasmus and Calvin, she who could retire from the admiration and glitter of courts to study the Bible and her own heart, she too had the Daisy flower worn by the nobles in her honour. May honour attend your fair correspondent for taking the Daisy under her protecting care, and may she be what Francis the First called his sister, the "Marguerite of the Marguerites."

When we glance at the order of plants to which the Daisy belongs in the Linnæan system of botany, we find in many families *flore pleno*, or double-flowering plant. The Chrysanthemum and Dahlia are well known, and there are various arrangements in nurserymen's catalogues where the double and single flowers of these families are placed. Now if something similar was done with the Daisy, new varieties, as they occur, could be placed in their proper divisions, and it would be of great use to those who desire to be better acquainted with "Flora's page,"

> "That welcomes every changing hour
> And weathers every sky."

Perhaps the different varieties now grown may be placed under one or other of the four following divisions:—

I. SINGLE, OR COMMON PERENNIAL DAISY.

This division may be little esteemed in the eyes of many, but we consider it the foundation of all the rest, and the different varieties found in it are at least very pleasing to children and poets, and we have spent many happy hours, long ago, in gathering them and adorning the branch of a Hawthorn by placing them upon its spines, or stringing them on Windle Straws, the stems of the crested Dog's-tail Grass (Cynosuras cristatus), to please the bairns. The different varieties of the single Daisy may be overlooked by the common observer, but it will require very little trouble to find broad and narrow petalled Daisies as well as long and short ones. Their marking also varies much, from pure white to dark purple, and those who will not take the trouble to examine the various paintings of the "Star of the Mead, sweet Daughter of the Day, that often blooms beneath the randon heild o' clod or stone," may know by reading the works of some of our native poets.

Burns calls it the "Wee modest crimson-tipped flower." Another will tell us about "Daisies with their pinky lashes;" and Montgomery sings,

> "There is a flower, a little flower,
> With silver crest and golden eye."

And I have no doubt but your fair correspondent must have examined the common single Daisy as well as the garden one, when she says, "Pluck it and you find it backed by a delicate stem of green, and tipped with a bright crimson, rose, or blush colour." These slight variations in the Daisy will, perhaps, be little valued by what are called scientific men, who are in search of what they call natural history distinction, to enable them to form generic and specific characters; but, perhaps, many of your readers will find as much pleasure in studying the varieties of the Daisy and "watching the closing buds at eve," as ever James Edward Smith had when he wrote the following constructed scientific description of the Daisy,

"Bellis perennis

Recept, nudum, conicum. Pappus O, Cal, hemisphæricus; squamis æqualibus. Sem, obovate, scapo nudo, radice repente. Fol, obovat. Fl, disc, aur. rad, alb, vel rubr.

To those who wish to increase the number of double varieties it might be useful to collect single varieties and plant them near some of the former, that their seed may be easily obtained. I am not aware that much honey is collected from the Daisy, but we are told that

> "The wild bee murmurs on its breast,
> The blue fly bends its pensile stem
> Light o'er the skylark's nest."

These insects may bring the pollen of one flower to the stigma of another, and the impregnation being by these means effected new varieties may be obtained by those persons who take pleasure in their cultivation. Then on beholding new beauties in their favourite, they will be ready to sing part of an old song with these words—

> "The Daisy amused my fond fancy,
> So lovely, so simple, so mild,
> Thou emblem, said I, o' my Phillis,
> For she is Simplicity's child."

(*Continued in our next.*)

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

AURICULAS and Polyanthuses, Carnations, Pinks, &c., should be placed in their winter quarters, in a dry, sunny, sheltered spot, but, at the same time, where a free circulation of air can be admitted on all proper occasions. The surface soil must be loosened, and a slight sprinkling of fresh compost be spread over it. Any plants out in the open beds, as Lobelias, &c., should be taken up and potted for winter preservation in pits, frames, &c. In taking up the bulbs of Tigridias, let all the soil be retained that will adhere, and allow them to be preserved therein; it will gradually dry, and they will be preserved very perfect. Chrysanthemums grown in the open ground, and required for blooming in-doors, should be taken up as entire as possible, and be potted; with due care they will bloom fine. All tender kinds of plants, as Scarlet Geraniums, Verbenas, in fact, every kind requiring winter protection, should be housed *immediately;* it is bad policy to put off a single day longer. Already we have had frost which has injured the tender things, in some places very severely; it is very probable a sudden and severe visit will soon occur. All plants like light; place them as near to the glass as convenience will allow, the farthest off the worst. Tender Roses, grown out of doors, should have protection over the roots, &c., or be taken up and housed.

ROSES may be planted by the middle of the month; they will strike fresh root before the severer weather occurs, and bloom better next season. In the excellent work on the Rose, by Mr. Paul, issuing in monthly parts, are the following remarks on soil and manure; he agrees with Mr. Rivers on the utility of burnt earth, especially in heavy soils, or where it is not well drained:—"Earth may be burnt at any season of the year. It has been the custom here, for some years, on the decline of spring, when the operations of pruning, grafting, &c., are ended, instead of suffering the rough branches to lie about, presenting an untidy appearance, to collect them in a heap. A wall of turf, about three feet high, of a semicircular form, is then built round them. The branches are set on fire, and, when about half burnt down, seaweeds, and such rubbish as collects in every garden and will not readily decompose, are thrown on the top, and earth is gradually cast up as the fire breaks through.

"During the first two or three days great care is requisite to keep the pile on fire. Here is the point where many fail; they allow the flame to break through and expend itself before the heap is thoroughly kindled. Constant watching is necessary at this juncture. As the fire breaks through, a layer of bushes and weeds should be added, and then a layer of earth. Follow up this plan, and the fire will spread through the whole heap; and any amount of earth may be burnt by continually adding to those places where the fire appears strongest. The soil burnt here is the stiffest loam that can be found within our limits, and which is rather of a clayey nature; also turf from the sides of ditches and ponds, in itself naturally sour and full of rank weeds.

"Burnt earth has been found beneficial in every instance where applied. In black garden mould, rather wet, in which Peach-trees were disposed to sucker and canker, despite of the use of various manures, two or three annual dressings of it appear so to have altered the nature of the soil that they now grow clean, vigorous, and healthy, are free from suckers, and produce roots completely matted with fibre. The like success has attended its application to various other trees."

So again with manure. The author is not misled by the excellence of stable manure to recommend it for light land; on the contrary, he is perfectly aware of the bad effect produced there by its mechanical action, and well observes—

"That stable manure, which is excellent in most cases, and the kind in general use for Roses, is not of the best description *for light soils.* Its tendency is to render them still lighter; and, if it can be dispensed with, we think it desirable to do so. Manures should be applied here in a more concentrated form. Cow-dung is excellent, especially for the tea-scented Roses; and pigeon-dung, rabbit-dung, and night-soil, are all great improvers of light soils."

DAHLIAS.—Let the crown of the roots be covered, heaping a few inches deep of soil around the stems.

SHRUBS of all kinds may now be planted (see remarks in our September Calendar).

SHRUBS, &c., FOR WINTER BLOOM.—Such as are to bloom early should be gradually prepared, potted immediately, if required, and by the middle of the month introduce such as are desired to bloom by Christmas into the house or pit. The kinds which are well deserving such attention are Roses, Honeysuckles, Jasmines, Azaleas, Kalmias, Persian Lilacs, Andromedas, Carnations, Pinks, of which Anne Boleyn is the best, Rhododendrons, Rhodora, Deutzias, Ribes, Spirea prunifolia, Mezereum, Gardenias, Cupheas, Heliotropes (the new blue is fine), Scarlet Pelargoniums, Cactus, Eranthemums, Justicias, Salvia, Gesnerias, Corræas, Chinese Primrose, Aconites, Mignonette, Primroses, Cinerarias, Stocks, Persian Iris, Crocus, Cyclamens, Sweet Violets, Hyacinths, Lily of the Valley, &c.

IN THE GREENHOUSE, STOVE, &c.

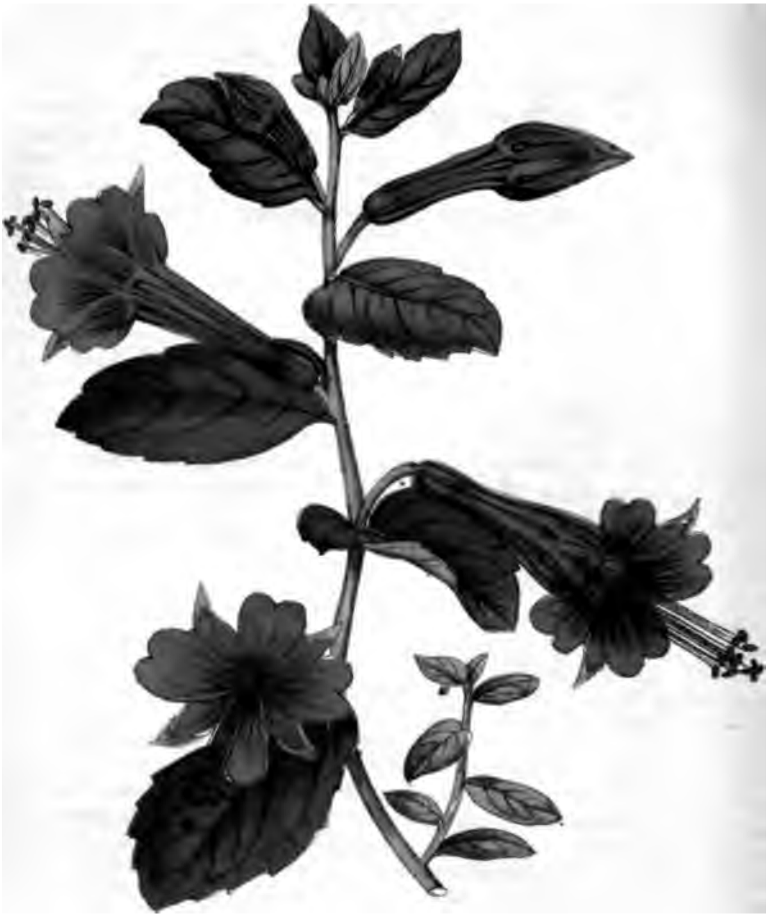
If the stock is not housed, it ought to be done immediately, and, as has been observed in a former Calendar, much judicious attention is necessary in the placing properly a mixed collection of plants. Care must be taken so that one plant may receive something like its proper treatment without interfering materially with the well-being of its neighbours; and whilst the tender ones must be placed in the best part for protection from cold wind, &c., as Polygalas, Pimeleas, Leschenaultias, Aphelexis, Baroneas, Gompholobiums, Croweas, and Diosmas, are always injured by being placed where there is a current of wind.

Let each plant have all the space possible, and the robust large-leaved kinds, and the very slender delicate sorts, should be kept as separate as can be arranged, so as to allow a due circulation of air. Always be careful that the pots, &c., be perfectly clean before arranged for their winter situation. Re-pot Cinerarias, &c. Let Camellias which are to bloom early be placed in a warmer situation, also any Chinese or Indian Azaleas, so that they may be gradually advancing. In watering the stock of plants, let it be done, as far as practicable, in the early part of the day, so that any excess may be dried up before evening, and damps be avoided, or otherwise mouldiness will ensue. Give all possible air in suitable weather.

PELARGONIUMS.—The plants headed down some weeks back, now have pushed shoots an inch or two long; the shoots should be thinned so as to leave only a proper proportion. The plants must now be re-potted in order to have the roots well established before winter commences. In doing this, shake off the exhausted soil, and shorten some of the long roots, or cut others clean away, so that young fibres which is essential to the vigour of next bloom, have a free drainage in the pots. If a compost, such as is recommended by Mr. Cock in a former Number, is not possessed, then take turfy loam well chopped up, with an equal portion of sandy peat and well rotted leaf mould, and half the quantity of well rotted dung. After potting, place them in a frame, or similar erection to induce them to push root soon, and keep them shaded from hot sun. Give air in the day-time, and be careful not to give over much water at the roots, for if saturated they will be injured.

ON CULTURE OF ROSES.

"IN order to insure a magnificent and lasting bloom, we have always found an abundant supply of manure absolutely indispensable; indeed it is perfectly useless to attempt growing Roses without it. When planted they require a good mixture of turfy loam and half-decomposed manure (at least one wheelbarrow-ful to each plant); and if standards they should be carefully staked. During the summer a plentiful supply of liquid manure will be found highly beneficial. It will be also necessary to cover the beds in the autumn with a good dressing of manure, and during the month of February it should be lightly forked in. The annual pruning takes place either in February or March, according to the season; the shoots should be shortened to about three eyes, with the exception of the Hybrid China and Hybrid Bourbon Roses; these only require some of the superfluous shoots trimmed out, and the remainder left nearly their full length. The climbing Roses may also be subjected to similar treatment. It will be advisable to protect the China and Tea-scented Roses during the winter months, by placing a thick layer of decayed tan round the plants; in addition to which we have found small branches of Spruce Fir, stuck into the ground a short distance from the stools, greatly assist in checking the severity of the frost."—*Wood's Catalogue.*



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Zauschneria Californica.

FLORICULTURAL CABINET

NOVEMBER, 1848.

ILLUSTRATIONS.

ZAUSCHNERIA CALIFORNICA.

THE Horticultural Society sent out Mr. Hartweg as a collector of plants into California in 1845. In the published Journal of the Society, which may be procured of any bookseller, there is an account of Mr. Hartweg's journey, &c.; and in our numbers for September and October we gave some interesting extracts from it. Mr. Hartweg observes—" On June 22nd, 1846, I left Montmorency for the mission of Santa Cruz. The mountains are well wooded with Taxodium sempervirens (Evergreen Cypress)," and, along with other fine new plants, he discovered on the outskirts of the woods the plant we now figure, viz., Zauschneria Californica, the flowers of which, he states, are scarlet, and like the Fuchsia.

In the *Journal of the Horticultural Society*, Dr. Lindley gives the following particulars:—" This curious plant, which it has long been an object to obtain, proves to be a species of much horticultural interest. It forms a hardy perennial, about three feet high. Every branch emits from the axils of all the upper leaves one horizontal bright scarlet flower." The plant grows freely in a good rich loamy soil, and when we saw it, during the past summer, in bloom in the garden at Chiswick, it was an object of great beauty. Dr. Lindley states, " It is a very fine hardy perennial plant, rivalling the Fuchsia, and will most probably bloom from June to October." It is a very valuable acquisition for the flower garden, and it ought to be in every one.

NOTES ON NEW OR RARE PLANTS.

BEGONIA AURANTIACA.

This is a valuable acquisition to this charming and interesting tribe of hothouse plants. The flowers are large, of a beautiful orange colour, and are produced very copiously. It ought to be in every collection. It is in Messrs. Henderson's nursery, Pine-apple-place.

CERATOSTEMA LONGIFLORUM—LONG-FLOWERED HORNBERRY.

Vacciniaceæ.

A very beautiful evergreen shrub, the stem and branches of which are hairy, the latter clothed with scattered, smallish, oblong, smooth, entire leaves, without stalks, leathery, and slightly revolute on the edges. The flowers form loose clusters at the end of the shoots, and are of a rich purple colour (or, according to Mr. Lobb, scarlet); the corolla is two inches long, cylindrical, deeply notched at the end into five sharply-pointed teeth. It is a native of the mountains of Peru, at an elevation of 12,000 feet, and is one of Messrs. Veitch's introductions.

CLEMATIS INDIVISA, var. LOBATA.

This very showy and handsome plant is a native of New Zealand. It quite festoons the trees and shrubs with its leaves and profusion of large panicles of flowers. It is a very ornamental greenhouse climber. The flowers are white and cream colour. The filaments are yellow, with rose-coloured anthers, and the contrast of the colours is very pretty. Each flower is about two inches and a half across. It bloomed this season in the Royal Gardens of Kew. It well deserves a place in the greenhouse, and it probably would flourish in the open air against a good-aspected wall or trellis. (Figured in *Bot. Mag.*, 4398.)

CUPHEA PURPUREA.

This is a variety which is in the London nurseries. The flowers are the size and form of C. miniata, of a rosy-purple colour. It is a neat companion for the other kinds, and, like the C. strigulosa and platycentra, is highly ornamental throughout the summer in the open borders, as well as when kept in the greenhouse.

EPACRIS CAMPANULATA MAXIMA.

This beautiful variety, as well as the two following, have been raised at the nursery of Messrs. Low, of Clapton. The tube of the flower is half an inch long, very wide at the mouth. The tube is a rich crimson, with the segments of the mouth a paler colour. It blooms profusely, and is a beautiful variety of a charming tribe of flowers. (Figured in *Pax. Mag. Bot.*)

EPACRIS, var. BICOLOR.

This is more of the E. grandiflora habit, with shorter leaves. The flowers are drooping, an inch long, slightly campanulate. Tube a deep crimson, with a five-parted white mouth.

EPACRIS, var. DELICATA.

A branching, somewhat bushy plant, growing a yard high. The flowers are drooping, three quarters of an inch long. The tube is white, with a rosy-pink tinge, and the five-parted mouth white. It is a profuse bloomer, and a very pretty addition to this lovely tribe, deserving to be in every collection. (Figured in *Pax. Mag. Bot.*)

GOMPHRENA OFFICINALIS.

Most of our readers will know the old beautiful Globe Amaranthus of our stoves and greenhouses. This new species we observed in the stove in the Chelsea Botanic Garden. The flowers are terminal, three inches across, of a rich shining red colour, with the bracts of a bright scarlet. It is a fine species, highly ornamental.

HOYA BELLA—THE BEAUTIFUL HOYA.

This lovely species is a native of Taung Kola Mountain, and was sent by Mr. Lobb to Messrs. Veitch, of Exeter, where it bloomed last summer. Sir William Hooker says, "It cannot be called a climber, but the branches are diffuse, the leaves resembling those of the broad-leaved Myrtle." The flowers are borne in profusion along the erect branches, in corymbous heads of eight or ten in each. They are of waxy-white, with a purple centre (the corona), nearly the size of H. carnosa. They are deliciously fragrant. (Figured in *Bot. Mag.*, 4402.)

IMPATIENS REPENS—CREEPING BALSAM.

A native of Ceylon, and has bloomed the last summer in the greenhouse in the Royal Gardens of Kew. It appears to be only annual, but easily kept up from year to year by cuttings. The flowers are large, with the top crowned by a helmet. A separate blossom is an inch and a half across, of a rich yellow colour. (Figured in *Bot. Mag.*, 4404.)

IXORA LANCEOLARIA—LANCE-LEAVED.

A neat stove shrub from the East Indies. The flowers are of a greenish-white, rather of a loose appearance, produced in terminal heads, about three inches across. (Figured in *Bot. Mag.*, 4399.)

ONCIDIUM SPILOPTERUM—THE SPOTTED-WINGED.

This beautiful orchideæ is a native of Mexico, and has bloomed in the fine collection of Messrs. Loddiges. It grows freely, and blooms profusely. The sepals are small, and of a purplish-red colour; the petals very similar. The labellum is large, broad, of a clear yellow colour. (Figured in *Pax. Mag. Bot.*)

SIPHOCAMPYLUS MANETTIÆFLORUS—THE MANETTIA-FLOWERED.

A small, erect, bushy, shrubby plant, of a very neat appearance. The leaves are about an inch long, of a shining green. The flowers are tubular-formed, an inch long; tube a bright red, with a five-parted golden-yellow end. It flowers freely, is very pretty, and blooms nearly all the year. It deserves to be in every greenhouse. With us it has been ornamental all the season, and appears likely to continue through the winter. An interesting companion for the Corræas, which the flowers very much resemble at a distance. (Figured in *Bot. Mag.*, 4403.)

THUNBERGIA DODDSII.

An hybrid, raised by Mr. Dodds, of Salisbury. The flowers are of a deep orange colour, and the foliage is prettily variegated. A handsome variety.

ON THE CULTURE OF FLOWERS FOR WINTER DECORATION.

BY A. B., WILTS.

I BEG to forward for insertion in your next CABINET a few remarks on the culture of flowers for winter decoration. The following plants form a charming effect during winter, when excited early. Although the varieties are very common, and appear to the eye not worthy of notice in spring and early summer, simple as they are, they enliven those who are fond of Nature's productions.

Dianthus barbatus pumilis (Dwarf Sweet William) is well adapted for early forcing, and ought to be in every collection of forced flowers. The seeds are sown in August, in an open but sheltered situation. About the conclusion of the following summer, the young plants are lifted up as entire as possible, and potted into suitable sized pots, with a view of getting them well established previous to forcing the succeeding winter. Many other varieties of this tribe form a great addition to winter flowers when forced, and are highly ornamental, and perfume a room or greenhouse.

Convallaria majalis (Lily of the Valley, single and double flowered) is another valuable flower when excited early. When a bed of these roots is cultivated, the strongest are selected, and potted into shallow pans, using leaf-mould and loam in equal portions. After this operation, the pans are plunged to the rims in a shady situation fully exposed to the north, and grown in this way for one year previous to being forced. These plants also like to be placed in a shady situation during the time they are in their forcing quarters.

Philadelphus coronaria (Syringa, the common and dwarf variety as well as the double one). These plants are easily propagated by layers or cuttings, and readily formed by stopping to a neat bushy plant, and are valuable for early flowering. They require, at the commencement of forcing, to be forwarded in a gentle heat, at no time subjecting them to a temperature higher than sixty degrees. When the flower-buds are in an advanced state the plants are removed into a warm greenhouse, where they expand their flowers beautifully, and retain their properties for a long duration. The fragrance has a strong resemblance to the blossom of the Orange tree. Loam, leaf mould, and silver sand, form the best compost, in which these plants thrive.

Deutzia scabra. It requires about the same treatment as the Syringa. Plants are more easily raised by cuttings than by layers, as it roots freely from the young wood. When they are well established in pots, and judiciously managed, a profusion of bloom is always obtained. These beautiful delicate, white flowers 'when systematically arranged produce a pleasing contrast with the darker ones of other plants.

Daphne cneorum. A plant well worthy of cultivation for winter flowering. It requires to be gradually excited in a low temperature to flower it in perfection. A specimen under proper cultivation, and brought into flower early in February, is the admiration of all who see it. The beautiful pink flowers and its delightful perfume renders it a charming acquisition. Plants are easily propagated by layers, and flourish when grown in sandy peat and leaf mould.

(*To be continued.*)

HYBRID PERPETUAL ROSES.

One of the readers of the Cabinet asks for a list of a few of the best of this fine class of Roses. I see Mr. Rivers recommends the following,—Aubernon, crimson; Augustine Mouchelet, brilliant red; Baronne Prevost, bright red; Countess Duchatel, bright rose; Dr. Marx, brilliant red; Duc d'Aumale, brilliant crimson; Duchess of Sutherland, handsome rose colour; Lady Alice Peel, deep pink; La Reine, brilliant glossy rose colour; Madame Laffay, rosy crimson; Marquis Bucella, pale flesh; Robin Hood, bright pink.

In remarking on the operation of cross-breeding Roses, he states "the one to be fertilized should be carefully opened the day previously, and the male organs or anthers cut away with a pair of sharp-pointed scissors, and it requires some watchfulness to do this at the proper time. If too soon the petals will be injured in forcing them open; and in hot weather, in July, if delayed only an hour or two, the anthers will be found to have shed their pollen. To ascertain precisely when the pollen is in a fit state for transmission, a few of the anthers should be gently pressed with the finger and thumb; if the yellow dust adheres to them the operation may be performed. It requires close examination and some practice to know when the flower to be operated on is in a fit state to receive the pollen; as a general rule the flowers ought to be in the same state of expansion, or, in other words, about the same age. It is only in cases where it is wished for the qualities of a particular Rose to predominate, that the removal of the anthers of the Rose to be fertilized is necessary. Thus, if a yellow climbing Rose is desired, by the union of the yellow Briar with the Ayrshire, every anther should be removed from the latter, so that it is fertilized wholly with the pollen of the former.

"In some cases, where it is desirable to have the qualities of both parents in an equal degree, the removal of the anthers must not take place. Thus I have found, by removing them from the Luxembourg Moss, and fertilizing that Rose with a variety of Rosa Gallica, that the features of the Moss Rose are totally lost in its offspring (the seedlings), and they become nearly pure varieties of the former; but if the anthers of the Moss Rose are left untouched, and it is fertilized with Rosa Gallica, interesting hybrids are the result, more or less mossy."

Bourbon Roses.—In writing on this lovely class of Roses, Mr. Rivers states in his catalogue:—"This charming family is now almost perfect, so numerous are the splendid varieties recently added to it; for beds on their own roots they are unrivalled; for when well established they seldom receive any injury from the winter. An excellent compost for these Roses on their own roots, in stiff soils, is burnt earth, *i.e.*, any weedy or grassy surface pared two inches deep and burnt, well saturated with manure water, spread on the surface two inches deep and then mixed with the soil to about one foot in depth." In regard to China Roses, it is stated that "for beds for the flower-garden on their own roots, these Roses ought to be cultivated in preference to many annuals, they are so constantly in flower during the summer and autumn, and give so little trouble. China Roses form beautiful low standards for a group. To ensure their succeeding perfectly, these should be taken up about the end of November, and placed against a north wall, their roots placed in the ground with their heads resting against the wall, over which a mat should be nailed in severe weather; they may be planted out towards the end of March, and they will bloom in great perfection during the summer and autumn." The same treatment is recommended for standard, tea-scented, and other tender Roses.

ZINC LABELS.

Labels for garden purposes of an economical and durable kind may be made in the following manner:—Damp zinc labels with a solution of alum, and while they are damp, write the name you require, and you will find the letters when dry are very difficult to efface.—*Gardeners' Journal.*

LABELS FOR TREES, SHRUBS, OR BORDER FLOWERS.

BY AN AMATEUR GARDENER.

In some of our public as well as private gardens around London I have seen with much pleasure cast-iron labels, the head of which is generally an oblong square, and the shank proportionate in length and strength to the size of the head. In the head there is a sunken space, and a piece of parchment or paper being fitted to it, the name is inscribed upon it; over this a piece of glass is fixed and properly secured in with putty. These look well, and for a period are efficient. Some thus constructed five years ago I notice the writing is become very dim and will not long be legible. Now I am informed in the *Gardeners' Journal* that more than 20 years ago some of these shaped iron labels had the names wrote upon a thin piece of wood instead of parchment or paper, the wood being painted white, and the name immediately written with a black-lead pencil; and they are now in an excellent state of preservation. I suppose tin or zinc would answer as well as wood to have the name upon. Cast-iron labels may be obtained very cheap at the iron founderies; patterns being furnished as to form and size. Winter is a good time to attend to this matter.

ON FAIRY RINGS.

BY A CONSTANT SUBSCRIBER.

I PERCEIVE an inquiry is inserted in a late Number of the CABINET on fairy rings on lawns, &c. After seven years satisfactory result with the following operation, I think it long enough to enable me to state that my plan will prove a cure for the disease wherever it be adopted. It is as follows:—

Take off the turf one inch thick, then take out soil about three inches deep. Having done thus, get salt, soot, and quick lime of equal portions, and fill up the ring space so as to allow one inch of soil upon the mixture, and upon it lay the turf. New turf will be best, but I have succeeded with the old. This method may even be performed in the hottest weather, without having any unsightly appearance, by attending to watering the turf every evening till the roots have struck into the fresh soil.

[Several correspondents have asked what is the cause which produces such rings. Oblige us by the particulars, and any other reader too we shall be glad to hear from.—CONDUCTOR.]

REMARKS ON THE UTILITY OF PROMOTING A MORE GENERAL EXTENSION AND CULTIVATION OF FLOWERS, FRUITS, &c.

BY MR. PETER MACKENZIE, OF WEST PLEAN, NEAR STIRLING.

IT is pleasant to mark the progress of useful knowledge in any department of life, and we would look upon it as a mark of a healthy community when it is advancing among the masses of the working classes; in many parts of the country the love of gardening is greatly on the increase among working men, and, as we have remarked before, if cottage gardening was more encouraged by those who wish well to their country, it might be the means of benefiting many persons who may be struggling hard to earn an honest maintenance for themselves and families; and when their condition may be improved, their knowledge in other things may be the means of their doing good to others, and they may be led to wonder

"And think that earth should be so fair,
So beautiful and bright a thing,
That Nature should come forth and wear
Such glorious apparelling;
That sky, sea, air, should live and glow
With light, and love, and holiness,
And yet man never feel and know
How much a God of love can bless,
How deep their debt of thankfulness."

The gardens of cottagers and artificers might be made to produce much profit and pleasure when properly cultivated, and many instances could be given where much good has thus been done. Where competition is carried on the members of a Cottage Gardening Society soon learn to know the essential properties of the flowers, fruits, and vegetables they cultivate. Such knowledge prevents them from being imposed upon by designing men. They may not know much about hydrostatics, but they can tell that their stiff garden is much improved by draining off the stagnant water; or their information regarding vegetable physiology may be very limited, but they can tell how deep the roots of some plants penetrate in search of food, which sets them to trench and stir up their soil, that the rain and air, impregnated with nourishment, may reach the roots of their vegetables and give them a return for their labour. But perhaps gardening is not carried on in this country among working men to the extent that it ought to be. Gardening could be made to form part of a school education. The hand requires training as well as the mind, and to know how to use a spade, a hoe, or a rake, would prove in after-life a source of much enjoyment to many. A knowledge also of soils and manures, and a little acquaintance with vegetable physiology must ever be an advantage to those who have a piece of ground to cultivate.

It has been said by one who wrote on the means of inspiring a taste for gardening among the labouring classes of Scotland, that the proprietor, even although not immediately benefited, cannot fail ultimately of deriving advantage from improvement in the taste for gardening, which the children acquiring at school would spread over all the country. The youth of the country will, so instructed, grow up with a love of rural affairs, and instead of throwing away their time and money in low dissipation, both will be devoted in their leisure hours to useful pursuits. In addition to which, a love of plants and flowers being universally diffused, every district may in time have its little Garden Society and its meetings for the distribution of prizes for the best vegetables, fruits, and flowers, among its members. We may add that we have been in connexion with such Societies for many years and find them to work well, and to have been the means of improving the neighbourhood where they exist. Gentlemen might do much good at a small cost by giving countenance to such Societies.

"My garden was held in little esteem by me a few years ago," said a labouring man to us some time ago. "If I got it turned over in a careless manner in the spring it was all that I cared for, I left the planting and management afterwards to my wife and children, and often realized a poor return for our indifference. Things are altered since I became a member of a Horticultural Society; the produce of our garden is now one of our main stays, and the good culture is more pleasantly got over than the bad, and with my vegetables, flowers, and fruit, I think myself so far happy. Although at times my body be tired with hard work, yet amidst my flowers I can sing,

"And there before the little bench
  O'ershaded by the bower,
Green Southernwood and Lemon Thyme,
  Sweet Pea and Gillyflower,
And Pinks and Clove Carnation,
  Rich scented side by side,
And at each end a Hollyhock,
  With an edge of London Pride."

It has been remarked by Johnson, "That all the performances of human art at which we look with praise or wonder are instances of the resistless force of perseverance. If a man was to compare the effect of a single stroke of the pickaxe, or of one impression of the spade, with the general design and last result, he would be overwhelmed by the sense of their disproportion, yet these petty operations continued, in time surmount the greatest difficulties; to be successful in gardening a stirring energy must be kept up, and when perseverance is crowned with success it will be like balm to the heart."

In the parish of St. Ninians, county of Stirling, there have been, for some years, four Horticultural Societies, supported chiefly by working men. Besides their own separate exhibitions they have a united competition, which is a mark of the harmony that exists among them.

(*To be continued.*)

FORCING CROCUSES.

It is a common complaint that "the Crocus bulbs purchased last season did not flower; the leaves grew very rapidly and long, but we had not a single flower." The reason of this is obvious, it is simply this—they were put into too high a temperature. Crocuses will bear but little heat, and if you wish to grow them as you would like them to be (I am now speaking of in-door culture), I would recommend the following treatment, or something near it. Plant as early as you can get them (which will be in September, do not defer it later than October), in a pot, saucer, beehive, hedgehog, or anything you please, in moss, sand, or mould: give them a good watering after planting, and afterwards keep the mould, &c., a little damp until they are in a strong growing state, when they will require a constant supply of water. Keep them where there is no fire or artificial heat, such as on a staircase or room window, giving them all the light and air possible. About the middle of January you may, if desirable, put them into quarters a little warmer, but in a window, so that they have plenty of light, and no doubt the result will be a fine display of bloom.—*Gardeners' Chronicle.*

CUTTINGS OF PELARGONIUMS THAT ARE SUCCULENT.

BY A PRACTITIONER.

This very season has caused the plants of this lovely tribe to grow exceedingly vigorous and gross, and to keep up a stock for next year's planting cuttings are now putting in for striking. It is well known that those of a very gross character are with difficulty struck, and often rot off. I have found that this is induced by watering at the time put in, but if water be withheld for a week or ten days, it tends to the production of a callosity at the bottom of the cutting, and at the end of that time water may be given, and the cuttings are not only thus preserved from rotting, but the striking is much enhanced thereby. After the cuttings are put in, till the time of water being given, the pots should be placed where they can be shaded.

THE NEAPOLITAN VIOLET.

At a recent meeting held in the study of the gardeners on Messrs. Knight and Perry's Nursery Establishment, an essay on the culture of this lovely fragrant flower by Mr. Cox was read. It is inserted in the *Gardeners' Chronicle* of October 21st. The essay contains the following particulars.

Mr. Cox finds that this Violet succeeds best when grown in equal parts of loam and sandy peat and in a rough state. Of this compost, some time from the middle of April to the end, the bed is formed, and the surface very firmly trodden, and in it the runners are planted in rows one foot apart and six inches in the rows. As the runners begin to spread they are cut in, and much of the success depends on the plants being closely cut in until they are taken up for potting.

Stirring up the soil between the plants, and due attention to water are essential during the summer, and in very hot weather mulching is very beneficial, keeping the roots cool. Shading the bed, too, greatly contributes to promote a profuse and vigorous bloom, as well as preventing the plants being attacked by the red spider, which when exposed to hot sun, they are very liable to. Mr. Cox prefers their being grown in pots, that they flower not only as large, but more profusely than when grown in the soil of a frame-bed; for in the latter situation the plants run too much into stem, foliage, &c. The pots being nicely mossed and in profuse bloom, (he has had 100 expanded at once), are pretty for a room. The flowers too are more readily gathered when in pots.

The plants are taken up at the end of July or early in August, and are potted in six or eight-inch pots, and are placed upon ashes, with a layer of salt underneath to prevent worms getting into the pots. The plants must not be allowed to flag for want of water. To bloom them well, a little bottom heat is essential; Mr. Cox half plunges the pots. All air possible is admitted before noon and shut up early enough to have a little sun heat. A few pots taken in weekly will give a plentiful supply, and readily obtained, from October to April, when we expect a supply from plants in the open air. Mr. Wood considered shading in hot weather highly beneficial.

(There are several kinds of this class of Violets now grown. The one sold as the Tree Violet, which is known as the Perpetual, and Chinese, is the most profuse bloomer, and is an excellent forcer; it will produce flowers from September to May; and being trained to become erect, with a stem eight or more inches high, forms an interesting object. The flowers are of a deep violet-blue and very double. The Russian Violet (double variety) has flowers of a similar colour, it blooms up to the middle of June. The flowers are of a similar colour to the former, but not near so fragrant. This is the kind usually sold in the flower markets, and to give a stronger perfume, flowers of the former are mixed with the latter.

The Neapolitan Violets. Of these there are the double white and double blue. These are more tender than the previous mentioned kinds. The white is very fragrant, and the pure white intermingled with the violet and blue produces a pretty effect.—CONDUCTOR.)

SKETCH OF THE VEGETATION OF CALIFORNIA.

(*Continued from page* 252.)

" I ARRIVED at Yerba Buena after a passage of five days. A few days' detention enabled me to examine the neighbourhood, and added to my collection, among other less interesting plants, a white Myosotis, a Liliaceous plant, an Œnothera, a scarlet Aquilegia, an Iris, and Ribes echinatum, the latter common on the sandhills that surround the town.

" On March 23rd I embarked in a small launch with Mr. Cordua, who was proceeding to his farm in the Sacramento Valley.

" The vegetation in the Upper Sacramento valley is much earlier than about the bay of San Francisco; there the trees were still apparently dead, whilst here the Oaks were sending forth their young leaves, and the prairies were teeming with flowers, among which I recognized many old acquaintances. It was delightful to behold the variety of colours over the extensive prairie, produced by patches of a Leptosiphon, Gilia tricolor, G. capitata, Oxyura chrysanthemoides, Platystemon Californicum, Nemophila insignis, and another species, two Compositæ, a Viola, Eschscholtzia crocea, E. Californica, a Delphinium, and, in places where water collects during the rainy season, a Martagon, with dingy yellow flowers spotted with brown, Mimulus tricolor, two inches high, and Limnanthes pulchella, having an abundance of delicate pink flowers.

" On April the 13th I left with Mr. L. for his farm, seventy miles higher up in the valley. Crossing Feather river, which here is eighty yards broad, and of considerable depth, our course lay five-and-twenty miles along that river, through a beautiful wood of evergreen and deciduous Oaks: here I found, in sandy tracts, a Leptosiphon, with white fragrant flowers; Collinsia bicolor, the latter invariably growing at the foot of large oaks. Leaving Feather river, we struck across a prairie for twenty miles: here immense fields of Eschscholtzia crocea, E. Californica, and a Ranunculus, presented themselves, each species growing by itself, which with the plants observed on Mr. Cordua's farm, and Lupinus nanus, two Delphiniums, a Trifolium, several Compositæ, an Œnothera, and a Malvaceous plant, produced a splendid effect. A small patch of the beautiful little Leptosiphon aureus, with golden flowers, I also found in the open prairie; it is, however, by no means common. The prairies in the Sacramento Valley are divided by small rivers, termed 'creeks' by the American settlers: these creeks generally have a border of Oaks upon their banks, which also extend over the rich bottom lands. In the dry beds of these rivers I observed plants which nowhere are to be found on the prairie, the seeds of which have evidently been carried down from the mountains during the rains, as for example, Pentstemon azureum; an umbelliferous plant, with an aromatic tap-root, held in repute among the Indians for its medicinal properties; in rather damp places, Clintonia elegans, C. pulchella, and Limnanthes alba.

" An opportunity of visiting the mountains was afforded me a few days after my arrival, which I embraced with pleasure, as from the hostile character of the mountain Indians towards the settlers, it was not deemed prudent for me to make an excursion in that direction attended by a guide only; I therefore joined a party of settlers who were going to the mountains to examine the timber, and, if possible, to find a site for a saw-mill. On the first evening we encamped under a large oak, near Pine creek, a little mountain rivulet; here I found Asagræa, a Lychnis, an Umbellifer, Tritelaia, with a head of pink flowers supported on a twining stem, five feet long; in the creek, a Saxifraga; of shrubs and trees, a Ceanothus, evergreen and deciduous Oaks, and Pinus Sabiniana. This species of Pine, of which I saw some small trees near Monterey last year, rises here to the height of fifty or sixty feet, with a stem of six feet in circumference, and possesses none of the regularity so characteristic of the Pine tribe. The branches, which in other Pines stand in whorls, are in this species quite irregular (except when young), which, combined with the paucity of its partly bent down, glaucous leaves, gives the tree a peculiar appearance. Early the following morning we ascended the gradual acclivity, and passed through a brushwood entirely composed of a species of Ceanothus. At noon we arrived at the edge of a noble Pine forest; a few moments' rest, during which one of our companions shot a deer, enabled me to collect a Viola, an Erythonium, a Prunus, a Lilium, and a Cyclobothra. The species of Pine composing the forest is principally Pinus Benthamiana, with a few trees of P. Lambertiana, Abies nobilis, and a species of Thuja intermixed, a Ceanothus, spreading on the ground, and Cornus florida, which were the only plants observed in the pinewoods. On our return through a steep ravine, I found a shrubby Cercis, with pink flowers, a Prunus, and again Cyclobothra.

" By the end of April the prairies in the Sacramento Valley assumed a different aspect; two weeks ago they were a carpet of flowers, which have now disappeared, and a yellow, sickly tinge pervades the whole: such is the rapidity of vegetation under the cloudless sky of a tropical sun. Bulbous plants now make their appearance; the most common being Triteleia laxa, which not only grows in the open prairie, but also in the shaded and damp lowlands; a pure white variety of it I also found; it is, however, by no means common. One of the species of Calochortus is also very frequent; a whitish variety occurs occasionally along with Brodiæa congesta, and another liliaceous plant.

" Being now aware of the rapidity of Californian vegetation, I lost no time in collecting such seeds as were worth taking, and returned to my head-quarters by the beginning of May. Most kinds had, during the fortnight since I first saw them in flower, ripened their seeds, and it was with difficulty I found a few grains of the beautiful little Leptosiphon aureus, and similar plants, which, between their taller neighbours, had almost become invisible.

" An excursion to 'the Butes,' an isolated group of mountains between the Sacramento and Feather rivers, furnished me with species of Campanulaceæ, Labiatæ, Scrophularineæ, and Compositæ; a Gilia, a Linum, a Trifolium, two species of Asclepias, Clarkia elegans, Lupinus densiflorus, and an Umbellifer, called Yerba de la vivora, the leaves and stem of which are universally used with success against the bite of rattlesnakes.

" Another excursion I made to the mountains led along the right bank of the Chuba river, over the now parched up prairie. A ride of fifteen miles brought me to the foot of the mountains. The lower range, as in the former visit higher up in the valley, is occupied by a Ceanothus, a few live Oaks, and Pinus Sabiniana. Following a small rivulet, I found there a Mentha, and another Labiate plant, Stenactis, a shrubby Labiate with large white flowers, and Collinsia tinctoria. This new species of Collinsia is of stronger growth, though less striking, than C. bicolor; it grows chiefly in the dry sandy bed or on the banks of the rivulet, and produces its yellowish flowers mottled with purple much later than C. bicolor. On a subsequent occasion, when I returned to this place to procure seeds of it, my hands were stained yellow by the glandular hairs which cover the seedpods, from which circumstance I named it Collinsia tinctoria. Another interesting plant I found on this excursion is Nemophila speciosa, with white petals, one-third of which is tipped with purple. It grows generally near rivulets, or in damp and partly shaded places. If the few seeds I procured should vegetate, it will prove a great acquisition to that handsome genus. The higher part of this range of mountains is less accessible than on the former visit. My endeavours to procoed farther were eventually frustrated by the steep banks and swollen state of the Chuba.

" By the beginning of June I set out again, in company with Mr. Cordua and an Indian, to visit if possible the snowy heights of the mountains, generally termed by emigrants from the United States the Californian Mountains. After crossing the Chuba river, we struck across the prairie, and entered the mountains near Bear Creek, where we encamped towards evening in a grove of Pinus Labiniana and Oaks. The vegetation here differed in nothing from that observed on the right bank of the Chuba on a former visit. Calochortus, which had been very common throughout the Sacramento Valley, was still in flower here, the white variety being more frequent than the yellow. Early the following morning we were *en route* again, passing through an interminable wood of Pinus Sabiniana and Oaks. Here I observed a pretty little Allium, with purple flowers, an Asarum, a Viola, a Polemonium (?), Hosackia bicolor, and Mimulus bicolor, the two last luxuriating in the sandy bed of dried up rivulets. Ascending the gradual acclivity, we left the region of Pinus Sabiniana, and entered that of Pinus Benthamiana, which seems to be the characteristic of the upper region. Some trees of this noble Pine attain an enormous size. The largest I measured were 28 feet in circumference, and 220 feet high. Of equal dimensions is P. Lambertiana, which, however, does not constitute masses by itself, but is thinly scattered among the former. The same is the case with a Thuja, which rises to the height of 130 feet, by 12 to 15 in circumference. Few plants occur in these Pine tracts; the principal being some Cyclobothras, a Calliprora, an Iris, Papaveracea; and, in shaded places, a Rubus, a Philadelphus, a Spiræa, Pyrus florida, a Rosaceous plant, and a Taxus—the latter, judging from the few specimens I saw, attaining only the size of a shrub or small tree.

"On the fourth day we reached Bear Valley, a beautiful little mountain valley surrounded by a lofty ridge of mountains, which is well wooded with Pinus Benthamiana. The north side of the valley was still covered with snow. On the south side, however, a few spring flowers had made their appearance, among which I observed Pæonia Californica, with brown petals edged with orange; some Compositæ, a Ranunculus, a Corydalis, and a Nicotiana. A new species of a Pine occurred in the valley, of which I only saw two trees of dwarf growth, probably stragglers from a more northern latitude. The leaves stand in pairs, and are three inches long; cones two inches long by one broad. In general appearance the tree is not unlike a young Scotch fir. The cones at the time of my visit were open, and the seeds had fallen out. The upper end of the valley is bounded by a mass of granite, terminating in a precipice 800 feet in depth, below which the Chuba river is winding its way, appearing like a sheet of foam. In warm and sheltered situations, where the snow had melted, I observed an Allium, a Pentstemon, a Statice, a Phlox, and a Calochortus, the latter not yet in flower. The more elevated parts above Bear Valley, from the severity of last winter, were still several feet deep covered with snow, for which reason we returned hence by the same road we came. Immediately upon my arrival at head-quarters, I proceeded once more to the Upper Sacramento Valley to collect such seeds as I could not procure before.

"Having packed up my collections, and sent part by water to San Francisco, I left on the 30th of June for Monterey in company with an American whom I had engaged as guide. Towards evening of the same day we arrived at the junction of the Feather river with the Sacramento, and passing the following morning our luggage over in a canoe we swam the horses across; the distance from shore to shore being not less than 300 yards. We now continued our course over the prairie on the right bank of the Sacramento river for two days, and crossed again to the south side in a ferry-boat at the Straits of Carquinez. A kind of tertian fever, accompanied by violent headache, under which I had been suffering some days previous to my departure, here developed itself into a quotidian fever and ague, which for want of proper medicines, the constant exposure to a tropical sun during the damp, and camping out at night, soon reduced me to such a state of debility as scarcely to be able to sit on horseback.

" From the Straits of Carquinez we passed along the Bay of San Francisco to the Pueblo of San José, and reached Monterey on the 8th of July. Soon after my arrival (having, with the assistance of my little medicine-chest, cured myself), I continued my excursions about Monterey as far as returning strength permitted, and collected such kinds of seeds as I thought worth preserving. Towards the end of July I went over to Santa Cruz for a similar purpose, and whilst visiting a family upon their farm, with whom I had become intimately acquainted during their winter residence in Monterey, I was again taken ill with fever and ague. In addition to the seeds which I collected in the Santa Cruz mountains last year, I found the evergreen Chestnut with ripe fruit. This shrub, of which I had been most anxious to procure seeds, attains the height of ten feet, and is of a pyramidal form. The nuts, which are produced in prickly clusters on the points of the young wood, are each enclosed in separate cells, and are of the same size and shape as the beech-nut. The kernel is pleasant to eat, resembling the filbert in flavour.

" On August the 13th I returned to Monterey, and was once more laid up with fever and ague, from which I did not recover until the beginning of September. On September the 6th I went again over to Santa Cruz in quest of pine-cones, which were now ripening. The sorts I procured were Abies Douglasii, Pinus Californica, and P. Benthamiana. The cones of the latter were unusually scarce this season, and seem to have suffered from late spring frosts; a few cones were all I could procure of this sort; they were smaller than those of the preceding year, and contained but few good seeds.

" On September the 20th I again left Monterey for the southern parts, which on account of the disturbed state of last year I could not visit before. As guide I engaged the services of a man who had accompanied me on my last excursion to Santa Cruz, and who, from his profession as a hunter, was well acquainted with the intricate mountain paths of the district I intended to visit. On the day of our starting we reached the Mission of La Solidad, an ill-constructed, half-ruined building, situate in the Salinas valley, and encamped towards evening on the banks of the Salinas river, within a short distance of the Mission. By sunrise the following morning we were again on horseback, and leaving the main road on the right we entered a mountain defile leading to the Mission of San Antonio. Here I observed a shrubby Arctostaphylos, with large brown seeds; a half-climbing Caprifolium, profusely covered with scarlet berries; an evergreen shrubby Oak; and a subdeciduous Oak, the latter forming a tree thirty feet high.

" From San Antonio a range of mountains extends along the coast, attaining a great elevation, which although apparently barren as seen from the Mission, I was assured on the western flank towards the sea is covered by large Pines. The lower region of this range, at the foot of which the Mission is built, is thinly covered by the evergreen Californian Oak, a Ceanothus, Cercocarpus, a small-leaved shrubby Fraxinus, and Pinus Sabiniana, the latter at the time with ripe cones. An evergreen shrubby Prunus, called Islay, with a holly-like leaf, bearing a red fruit resembling the cherry-plum, grows also abundantly here. The thin pulp which surrounds the proportonate large seed is sweet and pleasant to eat. The kernel, after being roasted and made into gruel, is a favourite dish amongst the Indians. Having ascended the first ridge we passed through thickets of Arctostaphylos tomentosa and Ceanothus thyrsiflorus, and entered a forest of Pinus Lambertiana. The cones of this noble Pine are always hanging from the points of the branches, were by this time already open and the seeds had fallen out. From cones that had been blown down I picked out a few seeds.

" Descending the western flank of the great mountain range I found at last the long-wished-for Abies bracteata, occupying exclusively ravines. This remarkable Fir attains the height of fifty feet, with a stem from twelve to fifteen feet in diameter, one-third of which is clear of branches, and the remainder forming an elongated tapering pyramid, of which the upper part for three feet is productive of cones. Having cut down some trees, I found to my regret that the cones were but half-grown and had been frost-bitten. In more sheltered situations, towards the sea-shore, the same happened to be the case; and I was thus precluded all hope of introducing this remarkable Fir into Europe.

" Finding it impossible to prosecute my journey to the south along the coast, from the numerous ravines which descend from the mountain range, I returned hence to San Antonio, and crossed by the farm of El Piojo, where the ridge is less elevated. A small Pine wood, which became visible on our descent, extending along the beach, looked like an oasis in the desert—the dark green of the Pines forming a beautiful contrast with the parched-up fields. Upon a nearer examination I found the wood to be composed of a variety of Pinus insignis, with larger cones than those about Monterey, from which it also differs in their being produced in less abundance."

THE CHRYSANTHEMUM.

BY AN AMATEUR.

SEVERAL years ago I turned out a fine collection of Chrysanthemums against a south-west aspected brick wall, where they have each year bloomed beautifully. During this summer I visited a nursery garden near London, and observed, on a similar aspected border, a collection of Chrysanthemums had been planted out about four feet apart (a double row in an alternate manner), and the shoots were then laid into pots sunk in the border up to the rim, which made a complete surface of dwarf plants about six inches high. On inquiry I found that, when the plants pushed shoots in spring, only as many were retained as were required for layering, all others were pulled clean off: this furnished a nursery supply of dwarf plants for sale.

On arriving home, I had some of the strongest shoots upon my plants grown against the wall, layered down into two rows of pots running parallel with the wall, and others into the border between the pots: in the rows there were, first a layer in a pot, and next in the border, &c. The pots were plunged up to the rims. When the layers began to push I had the leads pinched off to induce the production of laterals, each being left about six inches high; this was done about the middle of May. The layers pushed side-shoots, which I allowed the uppermost row to grow to half a yard high, when I had each shoot stopped. The front row I stopped when they had got about eight inches high. Both rows are now (September 14th) beautiful bushy plants, and very liberally set with flower buds, and no doubt will amply repay for the attention by a fine bloom. Having thus secured a supply of well-set blooming buds, I then severed the layers which were in pots from the parent plant. My intention is to take the pot plants out of the border for blooming in the Greenhouse, &c., and to allow those which were layered into the border to remain for blooming in their present situations, and thus afford me a fine slope of bloom from the tops of the plants trained against the wall down to the outer edge of the front row of dwarf plants, which will extend into the border seven feet from the bottom of the wall. The plants have been attended to with water in dry weather, but this duty was not often required this wet season. The soil of the border was very rich, a free supply of well-rotted manure had for years been given every spring.

This method of obtaining dwarf plants for the Greenhouse is readily accomplished, requiring little attention during the summer besides stopping the leading shoots. It is far preferable to raising them in pots after the usual method; the plants are not liable to be injured by lack of water, &c., and they are much more robust in growth, and the flowers, I am persuaded, will be much larger.

By this mode of obtaining dwarf plants for the open border, a circular bed may be provided so as regularly to incline from the centre to the extent of the circle, or a sloping bank be covered with dwarf plants, from six inches high, in a profusion of bloom. Such would be showy and handsome objects, with their varied mingling colours, throughout autumn, and be especially admirable if within view from a sitting-room. It is my intention to fill up a bed or more, thus situated, with a portion of the plants I have raised in pots this season.

I intend to retain all the layered plants which are to bloom in the border in front of the wall, from which my supply of layered plants may be obtained next year.

In a former volume of this Magazine I read the following particulars:—"Do not cut off the tops of out-door grown Fuchsias till spring, for if cut off before winter water will descend down the inside of the shoots, be operated upon by frost, and thus there is a great liability of the plants being killed." This remark led me to retain the tops of my out-door Chrysanthemums till spring, and then to cut them away. I usually lay a few inches of dry leaves around the plants to preserve them in winter. A supply of well-rotted dung is dug in between the plants against the wall, and I intend to do the same between those on the border.

HOLLYHOCK.

THIS noble flower is now beginning to take the station it so deservedly claims, and now ranks among the prize flowers of the floral exhibitions. Very great improvement has been effected in the perfection of form of flower, the choicest selected, and now distinguished by name. The following are the best we have seen:—

Admiration, French lilac, with velvet petals mingling in the centre portion.
Affghan, dark puce.
Aurantia, deep orange.
Attraction, chocolate and white, veined.
Atropurpurea, dark purple.
Anemoneflora, glossy crimson.
Black Prince, black.
Belladonna, superb white.
Bicolor, purple and white.
Brillante, vivid crimson.
Coccinea, bright scarlet.
Commander-in-Chief, light-edged rose, veined.
Delicata, French white.
Formosa, crimson purple.
Fulgens, dark shining crimson.
Jessy, light rose.
Magnum Bonum, fine maroon.
Mulberry, fine maroon.
Model of Perfection, fine white, with chocolate ground.
Napoleon, red and buff.
Purpurea Elegans, light purple.
Queen, beautiful light blush.
Rosea Grandiflora, light pink.
Rosea Alba, rose and white.
Rosea Superba, deep pink.
Sulphurea Perfecta, fine sulphur.
Sanguinea, rich dark crimson.
Virgin Queen, pure white.
Venosa, dark marbled.
Venosa Rubra, mottled red.
Wellington, rosy red.

SUPERB TULIPS.

MR. GROOM, of Clapham, near London, has long been celebrated for his vast and superb collection of Tulips. The last season he had upwards of 30,000 in bloom.

The Rev. S. Cresswell, of Radford, near Nottingham, is a cultivator, and an ardent admirer of these lovely flowers; and on a visit to view Mr. Groom's collection last May he took notes of some of the choicest, which are inserted in the October Number of the "Midland Florist." The following particulars are given:—

"The sight was most dazzling and magnificent; the sun was shining, and each lovely flower was beautifully expanded. I stood for a few moments at the extreme end of the bed, and was looking down upon these short-lived beauties in silent reverie, when my friend, Mr. Groom, called me to see his pet tulip,

"VICTORIA REGINA.—It is a chaste flower, and worthy of its name. Its form is graceful, elegant, and perfect; the cup pure and without stain, the ground colour of snowy whiteness, the feathering and flame dark rosy purple. It is a second-row flower, and the price *5l. 5s.*

"First and foremost among the feathered bizarres stands—

"LORD SANDON.—This splendid tulip will suit the taste of the northern growers; it is without controversy a magnificent seedling, and will be a match for any flower in its class. The ground colour is deep rich orange, pure base, form excellent, and deeply feathered with black; petals broad, thick, and fleshy. A third-row flower. Price *5l. 5s.*

"MARSHAL SOULT.—This splendid seedling was raised by Mr. Groom, and is a pet of the south, and may justly be classed among the purest bizarres ever grown. It is a splendid bold flower, stands erect, shape of Polyphemus, and of large size, with strong broad petals. The inside is a model of purity; it is an improvement upon Strong's King, but, like that variety, it does not always mark correctly. A second-row flower. Price 1*l.* 11*s.* 6*d.*

"WILLIAM IV.—A fine flamed bizarre, excellent shape and beautifully feathered; colour rich and good. A fourth-row flower. Price 2*l.* 2*s.*

"PRINCE OF WALES is a gem raised by Mr. Groom. The colour of this flamed bizarre is extremely rich, form good, base clean, and feathering perfect; the only drawback I noticed was the size of the flower. Mr. Groom informed me (if I recollect correctly) that it was an offset bloom. It is a second-row flower. Price 7*l.* 7*s*.

"GROOM'S DUKE OF SUTHERLAND.—This noble variety, I should imagine, was raised from Polyphemus, as it very much resembles that flower in colour. The flame and feathering of this new variety is good; it has every appearance of making a first-rate sort. A third-row flower. Price 5*l.* 5*s.*

POMPE FUNEBRE was beautifully clothed in yellow and black. The colour of this celebrated flower is rich in the extreme, and the size good, but the cup is rather too long to take the lead in feathered bizarres. A second-row flower. Price 4*l.* 4*s.*

PRINCE OF THE NETHERLANDS.—This splendid little flower I consider a master-piece, a perfect gem of its class; it is a flamed dark red bizarre. The feathering was the most beautiful I ever beheld; no pencilling of an artist could surpass it in softness of touch and fine delicate hair strokes. It possesses a short cup and pure base. A second-row flower. Price 1*l.* 1*s.*

"EVERARD.—This is another fine flamed bizarre, of the same class as Prince of the Netherlands. The cup is short, Catafalque shape; the marking is heavy, and laid on well; the base is clean, and the sort promises well. A second-row flower. Price 10*l.* 10*s.*

"ADDISON.—A splendid flamed hyblœmen; shape good, and base clean. A second-row flower. Price 1*l.* 1*s.*

"LADY PEEL.—This beautiful new sort was the best of its class upon Mr. Groom's bed, and will prove a great acquisition to the flamed roses. It is of superior form and colour, the cup is quite pure, and marking correct. A fourth-row flower. Price 5*l.* 5*s.*

"NOURRI EFFENDI.—This splendid bizarre I have no hesitation in pronouncing one of the very best upon Mr Groom's bed.

"It is strongly argued by several florists, that the above-named magnificent flower and Polyphemus are one and the same variety. At first sight, I thought them decidedly synonymous; but upon a closer and more minute examination, I discovered a slight difference in the colours of the anthers, those of Nourri Effendi being lighter than those of Polyphemus; the colour also of Nourri Effendi was a shade darker than Polyphemus. If the above-named flowers are one and the same sort, I certainly consider Nourri Effendi to be the finest strain. In my humble opinion, it is one of the finest bizarres in cultivation. None can excel it in shape and size; the feathering and flame cannot be surpassed; and as to the objection that the base is a lemon colour, that is entirely a matter of taste. London florists, I believe, generally prefer a lemon colour for the base of a bizarre, as it tends to show the darker colours to greater advantage."

The reverend gentlemen also visited Mr. Slater of Cheetham Hill, near Manchester, to view his fine collection, and remarks—"Mr. Slater has raised the following seedlings, from Polyphemus, impregnated by Sans Joe, *alias* Captain White, which he has named. As these seedlings have not yet broke into colour, I can only speak of their purity, shape, and size; and I must confess, in these particulars, they are super-excellent, and equal to any I saw at Clapham Rise. Mr. S. has given them the following names: — Oberlin, Adonis, Marcus Manlius, Lord Clifford, Conrad, Harry Bluff. They are bizarres.

"SLATER'S MY MARY did not please me. The shape and colour are good; it is a flamed rose, and was marked indifferently.

"QUEEN PHILIPPA is a splendid feathered rose, scarlet colour and short clean cup, and bids fair to be first-rate.

"DON COSSACK was the best flower upon Mr. Slater's bed; it is a dark flamed bizarré, feathers most beautifully, of excellent shape and pure yellow base. This flower was raised by Mr. Dark, and is not to be surpassed. Price 3*l.* 3*s.*"

A BED OF VERBENAS.

BY A LEARNER.

I HAVE a small bed of the best kinds of Verbenas, and am anxious to preserve them through the winter. I have not a frame: please inform me the likeliest method I may cheaply adopt in order to succeed.

(Fix a number of arched rods over the bed as numerous that they will support a covering of strong oiled-canvass. Upon the plants lay a foot deep of very dry leaves. The canvass will keep out the wet, and the dry leaves will protect from frost. In mild dry days the leaves may be removed aside, and the canvass be kept over, and whilst it will protect from cold it will admit sufficient light to be serviceable.)

LOCALITY AND SOIL FOR THE SUCCESSFUL GROWTH OF THE ROSE.

If we were called upon to select a spot as the best suited for the cultivation of Roses, we should seek one at such a distance from large towns that we might have the advantage of pure air. It should be open to the south, and be so far removed from trees of every description that their roots could not touch the soil of our Rose-beds, or their tops overpower us with shade and prevent a free circulation of air. If in addition to this we could choose our soil, that preferred would be a strong loam; if rich, the better; if poor, we would enrich it with manures. It is generally known that the Dog Rose delights in a stiff holding soil; and it is on this Rose the choice garden varieties are usually budded. We do not by this intend to recommend soils usually termed clayey, for in such there is often too great a deficiency of vegetable substances. Lighter soils, too, are found better suited for such kinds as thrive best grown on their own roots; this may be managed by the addition of a little turfy loam, peat, or leaf mould, at the time of planting. An open airy situation, and a stiff loamy soil are, we say, what we should prefer. With these at command we should expect to carry Rose culture to perfection.

Of long Pruning. If we remove many shoots from a strong growing Rose, or shorten the shoots in very closely, the result will be a vigorous growth but few or no flowers; and the shoots may be developed so gross as to render the flowering for the subsequent year partial or void. This is more to be feared when dealing with summer Roses and established plants than with the autumnals or newly planted ones.

Vigorous growers require long pruning, that is a sufficient portion of the shoots should be cut away at their base, which is called thinning out, to allow a free admission of air and light into the heart of the tree; then the shoots which remain after thinning should be left long. If cut close then the eyes are developed as wood shoots, and not flower shoots, and this is the cause of some of the vigorous growers not blooming, in instances that have occurred.—*Paul's Rose Garden.*

TO STAY THE BLEEDING OF PLANTS.

BY LUCY.

Having recently cut down some strong succulent growing Pelargoniums which were bleeding much from the wounds, a friend advised me to dust the parts over with slacked lime, this directly had the desired effect.

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

DAHLIA roots must be well dried before put away for preservation in winter. A cool dry cellar, where free from frosty air, we find is the best situation for keeping them in, laying them singly, not piling them in a heap.

SHRUBS, ROSES, &c.—Now plant as early as possible; be careful to secure them, so that winds do not loosen the roots.

Herbaceous border plants may still be divided and replanted. Also plant out biennials, as Scabious, Canterbury Bells, Sweet Williams, Queen and Brompton Stocks, &c.

Straw or reed hurdles ought now to be prepared for covering frames, &c., in the depth of winter.

TULIPS.—From the 1st to the 10th is deemed the best time to plant the bulbs; no delay should occur, if a good bloom is desired. Hyacinths, &c. should now be planted.

PANSIES.—In order to preserve plants securely through winter, some of each kind should be potted and be kept in a cool frame during winter. If there be not such convenience, but are retained in beds, then hoops and mats, thrown over in severe weather, must be used. If stock for next year is required, that provision should now be secured.

IN THE GREENHOUSE, &c.

All greenhouse plants should have a free supply of air admitted, except when it is frosty. The plants should not be watered in the evening, but in the early part of the day, so that the damps may be dried up before the house is closed, as they are, during the night, prejudicial to the plants. The soil in the pots should frequently be stirred at the surface, to prevent its forming a mossy or very compact state. The plants must not be watered overhead. Luculia gratissima is the finest ornament for the greenhouse and conservatory, now and through the winter.

The plants of the Cactus that have been kept in the open air during the summer may be brought to bloom successively by taking such as are desired to bloom immediately into the heat of a forcing-house.

Plants of the Calceolaria that have been grown in the open borders during the summer months, and now taken up and potted, should be kept in a cool frame, or cool part of the greenhouse, being careful not to give too much water; just sufficient to keep the soil moist will only be necessary. Offsets will be found rooted; take them off and pot them.

Dutch bulbs, &c. (See articles on best mode of the culture of each, in former numbers of the CABINET.) Many persons who take a delight in growing some showy Hyacinths or other bulbous plants, for adorning a room or window, &c., in winter or early in spring, have been frequently disappointed by the abortiveness of some and weakness of others. This principally arises from the inability of the plant to develop itself with a rapidity equal to the quantity of moisture it imbibes, on account of its upper surface being acted upon too immediately by the atmosphere, &c.; hence arises the necessity of covering the bulb. That such is a fact is evidenced by the admirable and certain success of nearly every bulb, especially Hyacinths, that is covered with about six inches of old spent bark. This or some similar light material should always be used. Even bulbs intended to bloom in glasses we prefer starting in the old bark, and then transferring them to the glasses when the shoots are about two inches long. Where such covering is not adopted, it is of advantage to have the pots or glasses kept in a dark place till the shoots are two or three inches long.

Plants of some of the Chrysanthemums that are grown in pots and taken into the greenhouse will be found to have pushed a number of suckers. If the offsets are wanted for the increase of the kind, it is advisable to pinch off the tops, so as to prevent their exhausting the plant, to the weakening of the flower. If the flower-buds are thinned out freely, it conduces to the increased size of those left. If the offsets are not wanted, it is best to pull up the suckers entire. Attention will be required to watering, as the roots absorb much, if given; give manure water occasionally. If the plant is allowed to wither, it checks the flowers, whether in bud or expanded. So much do we admire this handsome genus of flowers, that we are fully persuaded their beautiful blossoms, exhibited in form and colour, will most amply repay for any labour that may be bestowed on the plants.

SHRUBS, &c., FOR WINTER BLOOM.—Such as are to bloom early should be gradually prepared, potted immediately, if required, and by the middle of the month introduce such as are desired to bloom by Christmas into the house or pit. The kinds which are well deserving such attention are Roses, Honeysuckles, Jasmines, Azaleas, Kalmias, Persian Lilacs, Andromedas, Carnations, Pinks, of which Anne Boleyn is the best, Rhododendrons, Rhodora, Deutzias, Ribes, Spirea prunifolia, Mezereum, Gardenias, Cupheas, Heliotropes (the new blue is fine), Scarlet Pelargoniums, Cactus, Eranthemums, Justicias, Salvia, Gesnereas, Corræas, Chinese Primrose. Aconites, Mignonette, Primroses, Cinerarias, Stocks, Persian Iris, Crocus, Cyclamens, Sweet Violets, Hyacinths, Lily of the Valley, &c.

In the final arrangement of the stock of plants in winter quarters, guard against crowding it; drawn stock is not endured in these days; it is far better to throw a portion entirely away than to spoil superior specimens. Much of second-rate character, which requires another season's growth, may be preserved in good dry pits, at least until the middle of December, when, if very hard weather occurs, they may have a chance of removal, perhaps, to some of the other structures, until the end of January. It ought ever to be a maxim in regular plant-houses that no two plants touch; still we must confess that many who would admit the propriety of the principle are frequently compelled to practice otherwise, through want of sufficient accommodation.

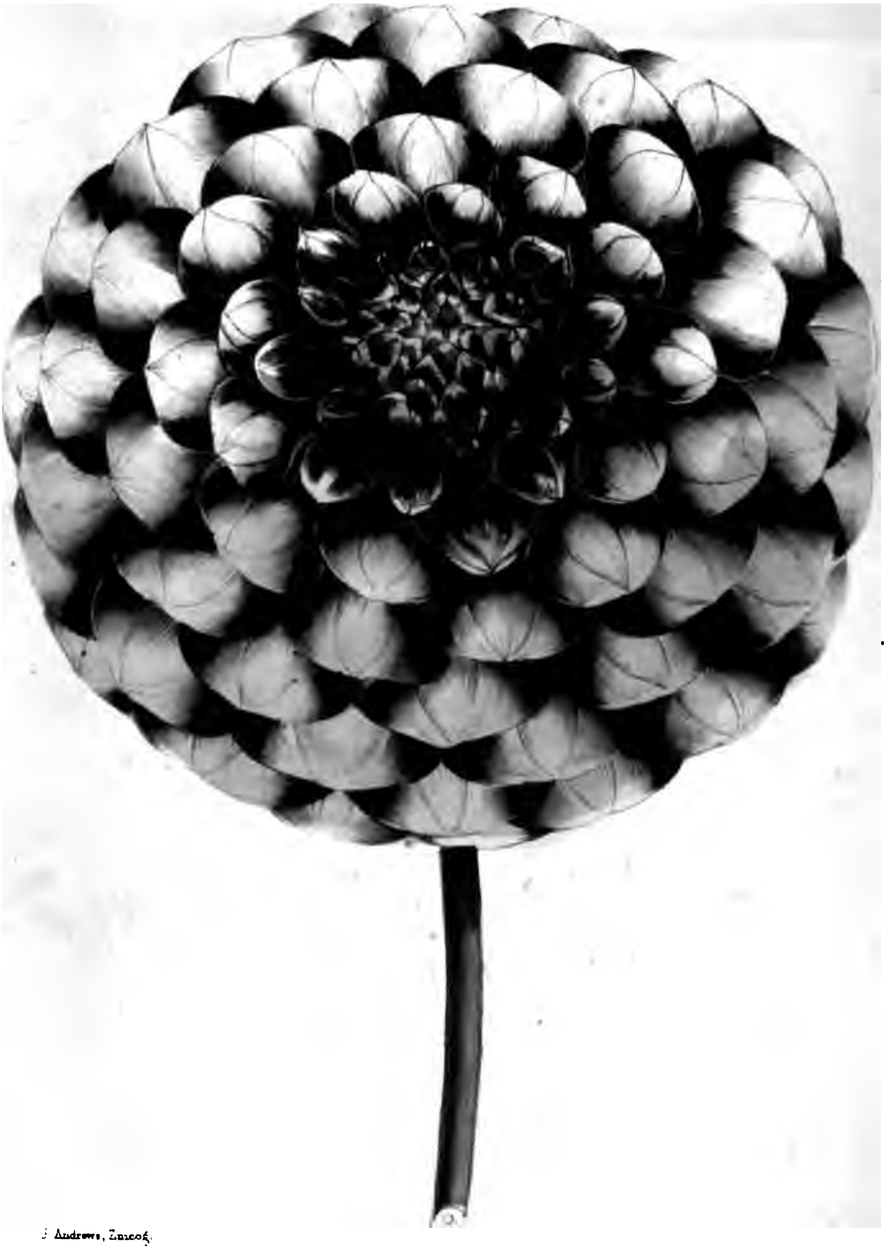
The Camellias which had been forced into growth in February and March will shortly be ready to open their buds. Let them be liberally supplied with clear and weak liquid manure. We use soot-water and guano in a liquid state, the latter in very small quantities. Nothing can exceed the healthy appearance of the plants so treated. The application of liquid manures is frequently wrongly conducted. There is no such wholesale manuring in Nature as we see practised in an artificial way. The ammonia of the atmosphere is presented in very weak doses, but in a continuous way. May we not take Nature as a model.

A FEATHERED TULIP.

The feathering of a tulip is a dark edge round the petals or flower-leaves. The flame is a dark, pointed spot, in the shape of a candle flame, in the centre of each petal. Tulips, according to the height to which their flower-stems grow, are called 1st, 2nd, 3rd, and 4th-row flowers. The shortest are put next the edge of the bed, and are called 1st-row flowers. The tallest, in the middle of the bed, are the 4th-row flowers.

LEAF, OR VEGETABLE MOULD.

This very desirable and almost indispensable ingredient, is, in many places, more difficult to obtain than either loam or peat. In country places, leaves can be collected either in woods or even by the sides of lanes under trees in abundance. And as leaf mould is such a treasure to the florist, no pains ought to be spared during the fall of the leaves to collect as many as possible. It is almost the best of all manures for the garden generally, but for plants in pots it is invaluable. It requires nearly two years to reduce it, by frequently turning over, so as to make it fit for the florist's purposes.



J. Andrews, Zincog.

Empereur de Maroc.

DECEMBER, 1848.

ILLUSTRATIONS.

HUIDOUX'S EMPEREUR DE MAROC DAHLIA.

NO flower, for the same period, has engaged the attention, and so deservedly been the object of admiration by a floricultural public, as the Dahlia, and certainly, too, no other has so amply compensated its admirers. We think the truth of this statement will be admitted if we apply it to its majestic and elegant appearance, when grown as it can be, and in full bloom. Or to its vast extent in varieties, the richness, number, beauty, and distinctness of its colours, and the perfection of form it has attained, more especially within the last two or three years with the class termed "Fancy Flowers," consisting of striped, tipped, and spotted varieties.

The kind we now figure was raised on the Continent, and sent out this year. It is a well formed flower, and the great contrast of colour presented renders it most distinct and attractive. It ought to be in the hands of all admirers.

NOTES ON NEW OR RARE PLANTS.

ACHIMENES CANDIDA.

RECENTLY introduced by G. W. Skinner, Esq., to the garden of the Horticultural Society. The plant grows from a foot to half a yard high, growing erect. The tube of the flower is half an inch long, yellow. The flat surface (limb) is white, with a faint streak of purple dots down the middle of each upper lobe, and yellow on the lower one.

ANEMONE HYBRIDÆ.

A valuable hybrid, raised by Mr. Gordon in the Horticultural Society's Garden, between the pretty white flowered A. vitifolia and

A. japonica. The flower has broader petals and of more substance than the latter sort, and is white with a delicate tinge of rose.

AQUILEGIA LEPTOCERUS—SLENDER-SPURRED COLUMBINE.

Mr. Burke found this species in the snake country of the rocky mountains. He observes—"I found near Medicine River a most beautiful Columbine, growing at the foot of a hill in rich loamy soil in great abundance; the flowers very large, beautifully white, variously tinged above with light blue. In my opinion it is not only the queen of Columbines, but the most beautiful of all herbaceous plants, and I never felt so much pleasure in finding a plant before." The plant is perennial. Stem herbaceous, and grows about half a yard high. Each flower is from two to three inches across, white, or creamy white with a tinge of blue, more generally of purplish green. It has recently bloomed in the Royal Gardens of Kew. It deserves a place in the flower-garden, and when grown in masses is a handsome object.

ARNEBIA ECHIOIDES — ECHIUM-LIKE. (Syn. Leptospermum erectum).

It is a hardy herbaceous plant, the flower-stems rise about ten inches high, terminating in large branching scorpioid spikes of yellow funnel-shaped flowers, having a wide spreading mouth. Each blossom is near an inch long, of a bright yellow colour, having five deep purple spots at the throat, giving it a very pretty appearance. It produces a very neat effect in the flower border, or when grown in a pot for some months in summer. It is in the collection at the Royal Gardens of Kew.

BURTONIA VILLOSA—VILLOUS.

Leguminosæ. Didynamia Monogynia.

A handsome greenhouse shrubby plant from the Swan River, from whence it was sent by Mr. Drummond. It has flowered in the collection of Lucombe, Pince, and Co., of Exeter Nursery. It is a dwarfish heath-like shrub, blooming profusely in spikes at the extremity of the branches. The handsome pea-shaped flowers are nearly an inch across, of a rich purple colour, with a yellow centre. Like all the tribe it is well worthy a place in the greenhouse.

CANTUA BICOLOR—TWO-COLOURED.

Polemoniaceæ. Pentandria Monogynia.

A handsome shrubby greenhouse plant, growing two to three feet high, a native of Peru, from whence it has been sent to Messrs. Veitch, with whom it has recently bloomed. It is a neat compact shrub with rich dark green foliage, the leaves being oval-shaped, and about three parts of an inch long. The flowers are funnel-shaped, an inch and a half long, and spreading at the flattened mouth to nearly the same extent across. The tube is a bright yellow colour, and the broad spreading limb a rich carnation red. It is one of the handsomest flowering greenhouse plants which has hitherto been introduced. It deserves to be in every one.

CHIRITA MOONII—MR. MOON'S CHIRITA.

In a recent number of our Magazine we figured this flower, and in the November number of the *Botanical Magazine* a noble figure of it is given. The plant bloomed beautifully in the Royal Gardens of Kew the last summer, and was an object of universal admiration. It deserves to be in every warm greenhouse or stove, blooming splendidly for a long period. We find it to grow very freely.

IAMBOSA MALACENSIS—MALAY APPLE.

A native of the Malay Islands, and is also cultivated in the West Indies on account of its fruit. It forms a handsome shrub, six or eight feet high. The flowers arise from the old wood, in large cymes of near twenty in each; they are of a rich purple-red colour, and the numerous long, thus coloured filaments produce a singular and beautiful effect. It is in the collection at Kew. (Figured in *Bot. Mag.* 4408.)

LUPINUS AFFINIS.

Recently introduced by Mr. Hartweg from Monteroy. It is a hardy annual, very much of the size and habit of the beautiful L. nanus, growing about eight inches high, and blooming most profusely for a long period, well suited to be grown in masses as a margin flower for a bed. They are of a bright blue with a clear white spot in front. In the Horticultural Society's Garden.

MONARDELLA UNDULATA. (Lamiacæ.)

A hardy annual, growing about ten inches high, having terminal heads of bright violet-coloured flowers. The plant is fragrant. In the Horticultural Society's Garden.

PASSIFLORA AMABILIS—WHITE-CROWNED PASSION-FLOWER.

It is a climber of medium habit. The calyx and petals are of a bright red within and greenish without. The crown of filaments are white, which produce a pretty contrast with the rich colour of the petals. It bloomed the past summer in the collection at the Royal Gardens of Kew. (Figured in *Bot. Mag.* 4406.)

RHODODENDRON JAVANICUM—JAVA ROSE BAY.

This splendid flowering plant is a native of Java, where it grows in the dense forests. There are several varieties of it known in Java, differing in the yellow or orange shades. It is a fine looking shrub, growing several feet high. The heads of flowers are about six inches in diameter. A single flower is near three inches across, of a deep orange colour. It requires to be grown in the greenhouse. Messrs. Veitch have had it in fine flower.

SWAINSONIA CORONILLÆFOLIA—CORONILLA-LEAVED.

A greenhouse shrubby plant, growing two to three feet high, and blooms very profusely. The very elegant pea-formed flowers are produced in long racemes, the spreading upper portion of the flower is of a violet-crimson colour with a yellow eye, and the keel of a deep purple. When the plant is properly grown, it is highly ornamental, and deserves to be in every greenhouse. It can be purchased now at a very low price. (Figured in *Pax. Mag. Bot.*)

NEW OR SUPERB FLORISTS' FLOWERS.

Picotees.—Prince Albert (Marris's). A heavy edged purple, of superb form and excellence.

Ada (Barringer's). A heavy edged red, of good substance, and fine form.

Queen of England (Barringer's). A light edged red, the margin being very neatly distinct.

Helen (Barringer's). A light edged purple, very neat.

Jessica (May's). A heavy edged purple, a flower of good shape and substance.

Prince of Wales (Marris's). A heavy edged red, of excellent form.

Jenny Lind (Ely's). A heavy edged purple, a fine formed flower.

Schamel (Read's). A light edged purple, of excellent qualities.

Regina (Gatliff's). A violet purple heavy edged flower, very handsome.

Miss Turner. A heavy edged red, good form and substance.

Gem (Youell's). A light edged purple, of first-rate excellence.

Marquis of Exeter (Halliday's). A heavy edged light purple. A fine formed flower.

Fairy Queen (Barringer's). A light edged purple.

New Pansies.—Magnificent (Neilson's). It has a rich rose ground colour, surrounded by a deep dark claret, with a delicate white hue completely encircling the outer edges of the three lower petals. Petals of good substance. A superb formed flower, and its singularly contrasted colours render it particularly handsome.

Blackley Hero. A self purple-coloured flower, perfectly round, good substance, and smooth edge.

New Tulip.—Earl of Dartmouth (Bunn's). Cup fine; petal of good substance, bottom pure and stainless, stamens clean; ground colour a rich chrome. Feather clean, bold and intense. It is a fourth row flower of first class excellence.

CULTURE OF THE WALLFLOWER.

BY A BRITON.

I am an ardent admirer of flowers, and rejoice at the appearance of lovely strangers being so constantly introduced into this country from foreign climes; but, at the same time, I have to regret that some of our old friends are neglected, not, I am well assured, for want of merit, but because they have been almost from time immemorial the finest ornaments of our flower-beds. I intend, successively, to bring before the readers of this Magazine some of these, in order to induce something like former attention to them, and such as they are entitled to. For the present Number I shall introduce the **Wallflower**, and what object of beauty and fragrance can vie with this spring visitant when displaying its charms to the beholder, whether it adorns the flower border, or as the poets say of it,—

"The rude stone fence, with fragrant Wallflowers gay,
To me more pleasure yield
Than all the pomp imperial domes display."

"Ye Wallflowers, shed your tints of golden dye.
On which the morning sunbeams love to rest,—
On which, when glory fills the glowing west
The parting splendours of the day's decline,
With fascination to the heart address'd
So tenderly and beautifully shine
As if reluctant still to leave that hoary shrine."

"Fair handed spring unbosoms every grace;
Throws out the Snowdrop, and the Crocus first,
The Daisy, Primrose, Violet darkly blue,
And Polyanthus of unnumbered dyes;
The yellow Wallflower, stained with iron brown;
And lavish bloom, that scents the garden round."

The Wallflowers are, in fact, Stocks; but very properly designated Wallflower Stocks; they are now, however, by custom, termed Wallflowers, entirely dropping the other name. In France the flower is much esteemed, and its name somewhat imports its estimate—the gold Stick; the golden Branch; the golden Garland.

Herrick tells us the origin both of the name and flower:—

"Why this flower is now called so,
List, sweet maids, and you shall know.
Understand this firstling was
Once a brisk and bonny lass
Kept as close as Danae was,
Who, a sprightly springal loved;
And to have it fully proved,
Up she got upon a wall,
Tempting down to slide withall;
But the silken twist untied
So she fell, and bruised, she died.
Love, in pity to the deed,
And her loving, luckless speed,
Turned her to this plant, we call
Now the flower of the wall."

In floral language the Wallflower stands as the emblem of fidelity in misfortune, because it attaches itself to the desolate, and enlivens the ruins which time and neglect would otherwise have rendered terrible. It hides the savage strokes of feudal times on the castle walls, fills the space of the wanted stone in the mouldering church, and wreathes a garland on the crumbling monument no longer noticed by friendly relations.

"For this, obedient zephyrs bear
Her light seeds round yon turret's mould,
And, undispersed by tempest, there
They rise in vegetable gold."

It is the flower with which the romance writers embellish all their decaying battlements, falling towers, and monastic ruins, and it seems as necessary to their stories as the dark ivy, the screeching owl, and the gliding spectre itself.

"Why loves my flower, the sweetest flower
That swells the golden breast of May—
Thrown rudely o'er this ruin'd tower
To waste her solitary day?
Why when the mead, the spicy vale,
The grove and genial garden call,
Will she her fragrant soul exhale,
Unheeded on the lonely wall?"

A northern poet says,—

"And well the lovely infant knew
Recesses where the Wallflower grew,
And Honeysuckle loved to crawl
Up the low crag and ruin'd wall.
I deem'd such nooks the sweetest shade,
The sun in all his round surveyed;
And still I thought that shattered tower
The mightiest work of human power."

The common Wallflower is a native of the south of Europe, and is found wild in Switzerland, France, and Spain; and we may presume that it was one of the earliest flowers which was cultivated in our gardens, from its being so constantly found on the ruins of our oldest buildings. The Wallflowers which grow out of the crevices of old buildings are of a much hardier nature than those of the garden, for as they can receive but little moisture by the fibres of the roots, their stem becomes firm and woody and able to bear the frost without injury, whereas those cultivated in the garden become succulent, and consequently more susceptible of cold.

The two principal varieties of the Wallflower are the yellow, and the red or bloody. From these, by intermixture, has many varieties sprung, as the yellow striped with a reddish brown, or the red striped with yellow. We have frequently sown the seeds of the rich iron-brown coloured on old walls, and they have uniformly degenerated into a plain yellow; we therefore conclude this to have been the natural colour, and the dark tint to have been first caused by the impregnation with its relative the scarlet flowering Stock, as by blending these two colours together a rich iron-brown will be produced. Within the last few years a number of beautiful single and semi-double flowering varieties have been imported from Germany, they comprise purple, lilac, violet, brown, yellow, scarlet, red, and others; of nearly all these colours there are striped kinds as well as self-coloured. These varieties have been originated between the Wallflower and the Stocks; they are beautiful, and well deserve to be in every flower-garden, especially near the dwelling-house.

The Wallflower having double flowers has been cultivated nearly three hundred years in this country; of it we have the blood-red, black, golden yellow, and pale yellow, and another which is nearly green: the four first kinds are worthy of every attention. They are so highly esteemed in some of the northern counties that they rank as prize flowers, and form a class for competition. It is quite surprising to see the very large specimens which are produced, spikes in bloom from eighteen to twenty-four inches long.

When the double flowering ones have ceased blooming they soon produce an abundance of shoots, and it is from such, being taken off entire, that the increase is readily obtained. The shoots should be taken off when they are from two to three inches long, having become a little firm at the lower part so as not to be likely to damp off, dress away the lower leaves about half way up, and then insert them either under a hand-glass in a shady situation, or in pots. A good close loamy soil is the best for their more certain striking root in. As soon as they are well rooted they may be potted singly into small pots, and be repotted if required, also be preserved in a cool-pit till March when they may be turned out into the open border, or be at once taken from the striking bed, and planted out where it is intended they shall bloom the following year. This planting out should be done as early as possible, so they may get well established in the ground previous to winter; this is very essential to their enduring through that season in the very cold parts of this country. A dry situation and sandy loam contribute to preservation. For winter protection too, a few fir or furze branches stuck around answers well; any attention is amply repaid when in bloom. An annual increase of young plants is best, but when it is desirous to retain plants that have become too large or straggling, they must be cut into the desired size and form, doing this as soon as blooming is over; they speedily push and become handsome plants.

The single flowering kinds are increased readily by seeds. For to have blooming plants early in spring sow early in August. To bloom from the beginning of July sow about the middle of September. To bloom in September and to the end of the season sow in May. When it is desired to perpetuate any particular variety, it is easily done by slips, for if other kinds bloom in the neighbourhood the flowers will be, almost certain, to be impregnated by the attention of bees, and the progeny from seed be different from the parents. The Wallflower delights in a good sandy loam, vegetable mould, and well-rotted cow-dung, and in such it should be in order to bloom satisfactory, but grown in a rather poor soil; in winter, the shoots are not so fleshy, but smaller and more ripened, and stand the wintet better. The richer soil is easily supplied to the plant early in spring.

ON STOPPING THE BLEEDING OF SOFT WOODED PELARGONIUMS.

BY A PRACTITIONER.

In last month's Number powdered lime is recommended. The plan I adopt, is, as soon as the plants are cut down I lay them on their sides, and they are not watered till I perceive that shoots are pushing; I then place them erect, and water, &c.

THE YELLOW PICOTEE.

Last spring we introduced the subject of raising yellow Picotees, possessing all the essential properties of perfection, fully equal to those flowers we now possess of any other colour. We solicited our friends who cultivate this lovely class of flowers to attempt the object by a careful attention to the impregnation of those flowers most likely to lead to the result. We hope that our request has been complied with, and the proof ere long will be realized. It is most desirable we should have fine-shaped flowers with a smooth-edged petal, of good substance, and of a clear rich yellow, with a distinct lacing, and such of both the light and heavy edged kinds. By attention to hybridizing, we now have superb flowers, with edging of scarlet, red, purple, rose, crimson, chocolate, &c., and in the yellows we may have equally fine varieties, of all shades from the primrose to the deepest and richest yellow.

In the last Number of the *Midland Florist*, there are some remarks upon the same subject by Dr. Horner. The doctor observes,—"In the more northern counties a taste for the yellow Picotee still lingers, and many there be that lament the want of good sorts. There is demand, but no supply. Because, then, of the countless combinations and diversity, both in the ground colour and the lacing, of which it is capable, because of its yet existing imperfections, let the effort, too long delayed, be in earnest commenced, to raise this flower to its true position; the chiefest of the Dianthus class, and to constitute it the most perfect, as it is the most beautiful aud attractive."

ON THE CULTIVATION OF CYPRIPEDIUMS.

BY AN OLD AMATEUR FLORIST.

In compliance with the request of a correspondent in the September Number for information how to cultivate the various species of Cypripediums, I forward you the following particulars of my mode of treatment.

Cypripedium is from *Kypris*, Venus, and *podion*, a slipper, or lady's slipper, in allusion to the form of the flower, which is shaped like a shoe. The flower is not only singular in appearance, but some of them are very handsome. One of the species is a native of this country, and several others have been introduced from foreign climes.

All the species I possess I cultivate as follows:—I plant them in large pans, sixteen to eighteen inches across, and eight inches deep. These pans are filled one-third of their depth with drainage.

For Cypripedium calceolus, which is a native of Britain, I use pieces of old mortar, lime rubbish, &c., and for the other species broken potsherds.

The compost in which I grow Cypripedium calceolus consists of the following materials:—One barrowful of decayed straw thatch or leaf mould, but thatch is preferable; one-fourth of sandy red loam, one-fourth of pulverised lime rubbish, and one-fourth of clean sharp grey sand.

The roots are planted very near the surface, and a handful of clean sand placed over the buds or crowns. On the surface of the pans I plant live growing moss, and grass round the edge. The plants have the pots top-dressed once a year, performing it as soon as they have flowered, in doing which the grass is pulled out, and small roots of it are again planted. If I wish to divide my plants (which should very seldom be done), I do it at this season of the year, whilst they are in a growing state, keeping them covered with glass for a week or two, and well watered; if the weather is warm and dry, they scarcely feel the removal.

During summer the pans are kept plunged in a situation where they have the morning sun to shine upon them till ten o'clock.

The same kind of preparation and treatment in other respects, I have practised with the American yellow-flowered species, viz., Cypripedium pubescens, and C. parviflorum, with the exception of the lime rubbish; I have no doubt, however, it would also suit these species, but I have not tried it.

C. spectabile, also a native of North America, requires a different soil, viz.:—a barrowful of sandy peat earth; half a barrowful of soft peat soil, with Sphagnum growing amongst it; the same quantity of old straw thatch or leaf mould, and a similar proportion of sharp grey sand. The roots are planted as described above.

When my plants are in a growing state, I give all the species abundance of water. C. spectabile particularly requires it. This latter will not bear removal whilst in a growing state, as the yellow-flowered species do, viz., C. pubescens, C. parviflorum, C. humile. C. arietinum should be grown in leaf mould and sand, as light as possible, and be treated in other respects as the before-named kinds.

My reason for planting grass round the edges of the pans is, because I find the roots of Cypripediums delight in running amongst the roots of grass. This is very observable on examination, in the summer season, when I have uniformly found vigorous white roots round the inside of the pans, which is a certain sign of health, the best proof whereof is evinced in the vigour of the plants.

I never protect my Cypripediums from autumnal rains, as is the practice of many cultivators of this tribe of plants. I find that they do not in the slightest degree suffer from moisture, provided the pans are properly drained, so that the water can pass quickly away.

During severe frost, I cover the pans with sheaves of clean dry straw, but I allow the plants to have all the moisture of the winter season, when the weather is mild.

By pursuing the treatment as above described for a number of years, this class of plants will be kept in health and vigour, and will annually increase in size. I had this season one root of C. pubescens, which produced fifteen flowering stems, and another root of C. calceolus, with thirteen blossoms,—both of which have been grown from very small plants. I have also been most successful with C. spectabile.

A very suitable mode of treatment with the tender species of Cypripediums, I will send for another Number.

CULTURE OF FLOWERS FOR WINTER DECORATION.

BY A. B., OF WILTS.

LOBELIA GRACILIS forms a neat little plant of a trailing habit, the small lilac flowers, producing a pleasing effect with its dark green foliage. I once grew some plants of it in a warm conservatory, which flowered beautifully from August until the following May. It succeeds admirably when trained to a trellis. Plants are easily raised by cuttings. A slight sandy compost suits it best.

Nemophila insignis and N. automaria. These cultivated in pots and grown together give a lively appearance during the dull months of winter, the former producing dark blue flowers, and the latter white flowers dotted with black spots. Every conservatory ought to be in possession of a few of these plants, as they grow and flower well in any spare corner, and in such places where many plants will not thrive. They are of easy culture, and continue flowering throughout the entire winter. The first week in July is the best time to make a preparation for a winter's supply, the seeds should be sown in shallow pans and then placed in a cool frame. When the seedlings are strong enough they are put off into 48-sized pots, four plants in each pot, and in this size the Nemophilas flower beautifully. They grow well in sandy loam and leaf mould.

Gilia tricolor. A pretty little annual, not perhaps sufficiently cultivated during winter to know its value. It requires about the same treatment as the Nemophilas, the seeds being sown the latter end of summer, with a view of getting the plants well established in pots before the dull season commences. Water at all times must be applied very cautiously.

Phlox Drummondii, with its numerous varieties of elegant colours are well worthy of pot culture. It is easily raised by cuttings or seeds. The Phloxes form beautiful objects when grown to large specimens, and brought into flower early in the autumn, after which they continue flowering for a long duration. It thrives well in sandy peat, loam, and leaf mould, in equal parts.

Phlox alba. This is a perennial, and of a dwarf habit. It is a very valuable plant for bedding out into the flower garden during summer. Early in the autumn the best of the plants being carefully lifted from the bed and potted, and placing them in an intermediate greenhouse, will produce flowers throughout a great part of winter, forming a pleasing contrast to the Phlox Drummondii. It grows and flowers well in almost any kind of soil. It is increased by division of the roots.

(*To be continued.*)

ROSES.

The planting season having arrived, we are again favoured with Descriptive Catalogues, as announced in our Advertising Sheet of our October and November numbers. In addition to the description of the Roses, some general remarks are given on the various sections of them.

That of Messrs. Paul's contains the following, and as they may assist our readers in making selections out of a class or classes suited to their object, we extract the portions with that object in view.

SUMMER ROSES.

PROVENCE ROSES. [Rosa Centifolia.]

In this section are some of the finest Globular Roses grown; their delicious fragrance is known to every one. To grow them in the highest state of beauty they should have a rich soil, and be pruned tolerably close.

MOSS, and their HYBRIDS.

Like the Provence, they require *high cultivation*, and their increased beauty amply repays whatever additional attention they may receive.

Du Luxembourg and Princess Adelaide are remarkable for great vigour of growth. They should be pruned very little; some branches should be thinned out, and the remaining ones bent downwards, to induce a profusion of flowers. They may be grown, also, as Pillar Roses. The moderate and dwarf Moss Roses require close pruning.

DAMASK ROSES.

In this section are to be found some very pretty pink Roses, with a delicate shade of salmon pervading the flowers, rendering them alike distinct and beautiful. The shoots and leaves of the Damask Roses are of a very light green, from which they present a striking contrast, when introduced among other Roses. Otherwise, they may readily be distinguished by their rough spinous shoots and coriaceous leaves.

ALBA ROSES, and their HYBRIDS. [R. Alba.]

The Alba Roses form but a small section, but are, from their extreme delicacy of colouring, a very valuable and popular one. They are distinct and surpassingly beautiful: as white, blush, flesh, and pink Roses, wholly without equal.

FRENCH, GALLICA or GARDEN ROSES.

The flowers are remarkable for their brilliant and richly-varied hues, perfect outline, fulness, and regularity in the disposition of the petals; to all which must be added a delicious fragrance. In this section are some interesting striped, marbled, and spotted Roses, singularly beautiful. They require moderately close pruning.

HYBRID PROVENCE.

Like the former, they possess those qualifications indispensable for exhibition—form and fulness—in a remarkable degree: they are delicately coloured, and altogether beautiful Roses.

HYBRIDS of CHINESE, BOURBON, and NOISETTE ROSES.

Some of the varieties marked Vig. or Rob. grow to perfection as Climbing or Pillar Roses. In pruning, they should be well thinned out, and the shoots left for flowering shortened but little. The moderate growers require closer pruning. To the exhibitor these Hybrids are altogether indispensable, frequently concentrating in the same flower perfection in the desired points—size, form, and fulness; and further, many of them are brilliantly coloured.

SCOTCH ROSES, and HYBRID SCOTCH.

These Roses are very early bloomers, and very sweet. The true Scotch are all globular, small, and double, and of dwarf compact growth; *they* are only grown as Dwarfs. The Hybrid Scotch are grown both as Dwarfs and Standards, and are pretty, distinct Roses.

AUSTRIAN ROSES. [R. Lutea.]

Harrisonii and the Persian Yellow are the two best *hardy* yellow Roses in cultivation. The latter cannot be too highly recommended; its flowers are of a deep golden yellow, and the foliage has the fragrance of the Sweet Brier. It blooms freely under ordinary treatment, but requires care in pruning; the head should be well thinned, and the shoots that are left for flowering suffered to remain long, for if shortened much, a fine head is formed, but there will be no flowers.

CLIMBING ROSES.

BOURSAULT ROSES. [R. Alpina.]

This is quite a distinct section, and, as Climbing Roses, are very gorgeous: they are hardy, rapid growers, blooming in immense clusters, requiring, when pruned, well thinning out, but little shortening.

AYRSHIRE ROSES and their HYBRIDS. [R. Arvensis.]

These may be correctly termed Running Roses; their growth is fine and very rapid. For planting in rough situations, where others will not thrive; for covering banks; or for running up old trees or pillars, the Ayrshire are excellent. They also form Weeping Roses of the first description when worked on tall stems.

EVERGREEN ROSES. [R. Sempervirens.]

These are valuable Climbing Roses, blooming in large clusters of from ten to fifty blooms each, and holding their dark green shining foliage through a great part of winter; they are free growers, and quite hardy. Like the Ayrshire, they form beautiful "Weeping Roses." In pruning, the heads should be well thinned out, a few of the most pendant shoots being left their whole length, which will flower to their very points, giving to the tree the appearance of a beautiful half globe, a mass of flower. A few of the best from each section are grown for sale in this manner.

BANKSIÆ ROSES. [R. Banksiæ.]

These Roses require a warm wall and dry border, with two or three years' growth, to bloom in perfection; they are then very beautiful. They also flower well in pots. They should be pruned very little; merely a few of the late strong shoots cut out about Midsummer.

AUTUMNAL ROSES.

(Flowering from July to November.)

PERPETUAL MOSS. PERPETUAL SCOTCH. DAMASK PERPETUAL.

These Roses are celebrated for their sweetness; they are perfectly hardy, and continue to give forth their flowers through the summer and autumn. They are mostly of one rate of growth, forming compact headed standards.

HYBRID PERPETUAL.

Varieties resembling in growth and foliage the Hybrids of the Chinese.

The hybrid Perpetuals are very beautiful Roses. These, with the Damask Perpetuals and Bourbons, are the finest and hardiest among the autumnals, and cannot be too highly recommended to amateurs residing near the metropolis, or in any locality where the Tea-scented or Chinese do not thrive well. They are fine forcing Roses, and very sweet. It would seem that few are better adapted for pot culture. They thrive best in a rich soil, with close pruning, regulated a little by the rate of growth. The vigorous and robust growers succeed well grown as Pillar Roses.

BOURBON ROSES. NOISETTE ROSES.

The Noisettes are fine Roses, blooming mostly in large clusters throughout the summer and autumn; some of them scarcely cease blooming for months. They are mostly free growers, and sweet; the true Noisettes very hardy. The vigorous growers are well adapted for Climbing or Pillar Roses, blooming fine very late in the year.

CHINESE, OR BENGAL ROSES. [R. Indica.]

These Roses are well adapted for growing in pots, or for planting in beds or lawns, or in any situation where an abundance and constant succession of flowers is desired. Compared with other Roses, they are of small growth; on this point differing less among themselves than most other sections. Here are some rich crimson Roses, very beautiful. Some are highly fragrant.

TEA-SCENTED ROSES.

The Tea Roses are celebrated for their extreme delicacy of colouring and delicious fragrance. They are rather tender, and require protection from frost during winter. When planted out of doors, the chief thing necessary for their successful cultivation is a soil well drained; and if it be not naturally so, this point must be attained by artificial means. A light rich soil is preferable, and a slight protection against frost suffices. We have found branches of the Fern (*Pteris aquilina*), which grows plentifully on most commons, ***stuck loosely among the plants, so as not to exclude the circulation of the air***, to answer this end perfectly; it may be removed once or twice during winter in mild drying weather. Fir or Furze branches will answer the same purpose. For forcing and for pot-culture, when grown under glass, the Tea Roses are without equal.

SEEDLING PANSIES.

It is stated by a celebrated grower, that seedlings raised from the seed collected from spring blown flowers, always produce the most perfect formed. This no doubt arises from the circumstance of their being less facilities employed at that early period to convey the pollen from inferior sorts to the better ones, and collectors of the seed, of course, refuse to gather from any but what are deemed of excellent quality, and thus the progeny must in the general be better in proportion.

AUTUMN BLOOMING PANSIES.

There are some kinds of Pansies bloom best in autumn, the following are of that class, and all of fine properties. We select from the *Florist*,—Bell's Duke of Norfolk and Aurora, Youell's Supreme and Marchioness of Lothian, Hooper's Berryer, Wonderful, and Blooming Girl, Thomson's Advancer, Constellation, Candidate, and Duchess of Rutland, Hall's Rainbow, Turner's Gem, Miss Edwards, and Addison, Gossett's Orastes and Polynices, Brown's Arethusa and Major's Milton.

HYACINTHS GROWN IN MOSS.

Fill an ornamental jar, or other suitable vessel, with fresh moss, let it be sprinkled with water, and place the bulb or bulbs firmly therein, covering them over with it. Let them be placed in a dark situation where it is a little warm, and the moss must be kept just moist, using water at all times about new milk warm.* When the roots have pushed about three inches long, let the vessel be removed to the light. A circular wire frame, with a few pieces across to tie the inside flower stems to, will keep them in a properly arranged and secure state. Mr. Hamilton, Seedsman, 156, Cheapside, London, will supply such to order at a reasonable price.

* All Hyacinths, whether grown in soil or in pots, or in water in glasses, if they are placed in a warm situation, should have the water of a gentle warmth, as cold water to such would soon produce sickness.

ON THE LILY.

A FLOWER GARDEN, with its appendages, is a source which affords delight and instruction to every contemplative mind. In our journeying through this world none of us escape scenes and pangs of sorrow, but how often have our minds been soothed and mollified by the sight and fragrance of lovely flowers, and we have frequently realized that to be a truth which has been uttered, "Every flower is a sermon," and preaches to us loudly and powerfully of the minute care and tender love of ours and its Creator.

And what flower, amidst immensity, is more calculated to arrest the mind than the Lily. Thus and there engaged the poet wrote

"Ye loftier Lilies, bath'd in morning's dew,
Of purity and innocence renew
Each lovely thought ——."

The exceeding beauty and delicacy of the Lily has been celebrated by writers in all ages from the time of Solomon to the present period. It was regarded by Jesus Christ himself as being more splendid than Jerusalem's great king when arrayed in all his gorgeous apparel; and on this account we cannot behold the Lily without feeling a kind of reverence for the flower mingled with our admiration for their elegance of form and purity.

"Queen of the field, in milk-white mantle drest,
The lovely Lily waved her curling crest."

"The Lily, of all the children of the spring,
The palest—fairest too where fair ones are."

"In virgin beauty blows
The tender Lily languishingly sweet."

"Observe the rising Lily's snowy grace,
Observe the various vegetable race;
That neither toil nor spin, but careless grow,
Yet see how warm they blush, how bright they glow;
What regal vestments can with them compare?
What king so shining or what queen so fair?"

It is a source of additional pleasure to us that to the noble race of Lilies which have adorned our gardens from remote ages, we have within the last few years added to the valuable family the charming members from Japan and Mexico, with some hybrid productions raised in our own country.

It is a generally received opinion that the oldest Lily of our gardens is the Lilium candidum, the common White Lily. It is doubtless a native of the Holy Land; and that a flower of such magnificence and sweetness of odour should have early attracted the notice of the Greek and Roman naturalists arises from a natural cause, since we find them as anxious to make additions to the plants of their country as the botanists of modern days.

The heathen nations held this flower in so high a regard as to consecrate it to their queen of the gods, Juno, from whom they say it originally sprang. And in order that this celebrated flower should lose none of its *celestial* dignity, we shall relate their account of the secret cause from which the Lily blesses our earth.

"Jupiter, wishing to render Hercules immortal, that he might rank him amongst the divinities, prevailed on Juno to take a draught of nectar, and queen Juno fell immediately into a profound slumber; Jupiter then placed the infant Hercules to her breast, in order that the divine milk might enter his frame, and so cause his immortality. The infant drew the milk faster than he could swallow, whilst some drops fell to the earth, from which this flower, (White Lily) immediately sprang up, and from this fabulous account it was called Rosa Junonia, that is, Juno's Rose." Such were the superstitions of olden times as relating to this lovely flower.

Aluat, in his celebrated emblems, tells us that Celestial Beauty is represented surrounded by a glory, half of the head hidden in the clouds, and as holding a Lily in one hand, and a compass and a ball in the other. And that Beauty is represented with a garland of Lilies and Violets.

As all nations agree in making a Lily the symbol of purity and modesty, it is the fit attribute of beauty, and perhaps no inhabitants of the earth blend it so happily with the Rose as the fair daughters of Britain.

In the Hebrew language the name Susannah signifies a Lily. In the Celtic language Lily signifies whiteness.

It is related by Boyle that Charles the Fifth of Spain, in his retirement, planted a Lily at the end of August, in the year 1558. The monarch died on the twenty-first of the following month, and it is pretended that, at the moment of his death, the bulb of this Lily shot out on a sudden a stem with two joints, supporting flowers as full blown and as odoriferous as the flowers are in Spain in their ordinary season. This beautiful flower was cut (we are told), and placed upon the great altar of the church of St. Juste on the borders of Castile.

By whom, and at what period, this beautiful Lily was brought to this country, is beyond our research; but most probably it was one of the plants we gained from Palestine by means of the early Crusaders, as Chaucer notices it in armorial bearings—

"Upon his crest he bare a tour,
And therein stiked a Lily flour."

It was in the reign of Edward the Third that the Herald's College was first instituted in England, and in eighteen years afterwards this monarch ordered the arms of France to be quartered with those of England, which continued to emblazon the British arms for four hundred and forty-four years.

The Lily appears to have been a favourite flower with the ancient Greeks, and in the wedding ceremonies of the modern Greeks the priest is supplied with two chaplets of Lilies and ears of corn, which he places on the heads of the bride and bridegroom as emblems of purity and abundance. All the wedding party are then crowned with flowers, and as they pass by the houses of their acquaintance, flowers, nuts, and cakes are strewed from the windows.

The Romans appear to have regarded the Lily with equal admiration, for they had it preserved or planted in baskets. Pliny mentions the Lily as next to the Rose.

The common Water Lily was so familiar in the time of Queen Elizabeth, that Gerard speaks of it as a native plant. He says, "Our English White Lillie groweth in most gardens of England." He further tells us, "That he received roots of White Lillies from Constantinople under the Turkish title of Sultan Zambach, which means Sultan's great White Flower."

This magnificent Lily is easy of cultivation; it does not like frequent change, but when the number of bulbs in one batch are as many as eight or ten, then take it up wholly and divide it into two equal parts, not severing each bulb, but retaining the four together, replant each portion as soon as can be done, for it is much more liable to suffer from being out of the ground than any other Lily.

The period to take them up and re-plant is the first week in September. They ought not to be taken up sooner than every third year. They flourish in a deep rich loamy soil, having a dry substratum. The crown of the bulb should be four inches below the surface of the ground. Never remove them at the spring season, as this checks their flowering for several years. They make a fine appearance when a few bulbs are together, and grow vigorously. When this Lily is planted in a flower border backed with the rich green foliage of shrubs, &c., they have a fine effect when in bloom. In the large half circle flower garden in front of the long range of plant houses, &c., in the grounds of his Grace the Duke of Devonshire at Chiswick-house, the boundary border has a large patch of these Lilies at about two yards' distance from each other, and, backed by green, they had a beautiful appearance when viewed from the centre of the houses.

Some persons prefer growing it in the Rose border, or bed, in consequence of the emblematical combination of Purity (the Lily), and Beauty (the Rose). They appear very lovely when rising up amidst a mass of highly coloured Roses, and displaying their elegant flowers. No flower-garden should be without it, and it ought to form one of the floral ornaments in every cottagers' garden. It is stated that there are about twenty varieties of this Lily. Bulbs may be procured at a very reasonable price.

(*To be continued.*)

CYCLAMEN PERSICUM.

BY AMICUS.

SEVERAL papers relative to the culture of this lovely sweet-scented flower have already appeared in this Magazine, but I think it cannot too often be brought before the notice of all lovers of fragrant flowers, and especially when it is to be had so very cheap and of such easy culture. With me it flourishes admirably by the following simple attention.

When, in spring, the plants have ceased blooming, I turn them out into the open ground in a good rich sandy loam, in a bed that is raised about half a foot above the surrounding ground. The situation is sheltered from cold winds, and the bed is shaded during mid-day by a large red cedar tree, from eleven o'clock till two. Attention to watering, &c., is duly given, in order to promote the vigour of the roots. At the end of August I take them up and repot in pots as the size of the root requires, generally using 24's to 32's. A rich soil of equal parts of vegetable mould and good loam is my compost. After potting, a free soaking of water is given, and I place them in a cool frame, where they remain till October. I then take a few into the greenhouse, put them near the glass, and in a warm situation. They soon come into bloom, and produce abundance of flowers. A succession is taken in, and by this means I have a supply of flowers from October to May, at which time they are turned out into the open ground again.

THE BELLADONNA LILY.

BY BURRIENSIS.

About twenty years ago I procured some bulbs of the above beautiful Lily, and having the advantage of growing some at the foot of a south aspected garden wall, and also of a west one, I planted thirty of them, at equal distances, in a very good, rich, deep soil, placing the bulbs nine inches deep, so as to have them protected from frost.

In three years' (or many in two years) time the whole of the bulbs bloomed beautifully, in some three or four stems, and one year there were fifteen flowers on one stem. They continued to bloom in September annually, in a most splendid manner, until 1843. That year no bloom appeared. They bloomed well in 1844, 1846, and 1847, but no bloom in 1845. This present year there are only three in bloom, and no sign of any other bloom; these three are very luxuriant. These roots have never been disturbed or meddled with in any manner since first planted. The foliage full as luxuriant the years they failed to bloom, as on other years, and this year I thought it more luxuriant than usual. This bed used to be quite a show to my friends.

What had I better do with it? Dig up the bulbs and clear away any offsets (if there be any)? And if so, when is the proper season, in November or in December?

I every year cover the whole bed with rotten stable manure; it is not dug in, and in the spring the manure is raked off. Every flower in the centre of the bed always flourishes exceedingly. It faces the sun, and is very well sheltered. I never knew a winter when the frost penetrated to the bulbs in this bed.

CULTURE OF ERICA CERINTHOIDES.

This species is one of the loveliest of the charming tribe of Cape Heaths. Its foliage is neatly covered with a soft down, and its large tube-formed rich scarlet flowers, arranged several together in a terminal crown, are exceedingly beautiful and ornamental. It blooms from

April to November, and merits a place in every greenhouse. It is usually considered difficult to manage, so as to have it a compact bushy plant, and it is generally seen with only two or three long naked crooked branches, and very few flowers. It has, however, the natural habit of pushing forth every year a number of young shoots from the bottom of the main stem; such should be encouraged. If they are very numerous, a part should be thinned out, leaving as many at will form it into a compact, neat, symmetrical plant. In order to promote this object, the principal stem from which the shoots proceed should be cut off nearly to the place they push from. A proper arrangement having once been provided, its bushy form is easily retained by an annual shortening of the' shoots which have bloomed. By this mode of treatment a profusion of its elegant flowers are produced, and the plant becomes one of the finest the greenhouse contains.

The cutting in of the plant must be done after the growing season is over; this is usually the case by October, at which time the young shoots from the bottom are beginning to push forth. Early in the following March the plant should be re-potted, in a good sandy turf peat, in a rough state, with a few bits of charcoal mingled in it. A liberal drainage too is essential.

This pruning in of the plant gives new vigour to it, and its subsequent healthiness and beauty when in bloom is quite surprising, and handsomely compensates for every attention. No doubt other naked growing kinds might be improved both in form and flowers by a similar treatment.

SCHOOL GARDENS.

The following admirable plan for promoting the love of industry in lads, we should like see adopted as extensively as possible. "In the immediate neighbourhood of Nottingham are an immense number of small gardens, occupied and cultivated by all grades of society; and with a most laudable and praiseworthy feeling the friends connected with the High-Pavement Chapel Boys' Sunday-school have purchased two of these inclosures, in each of which is a commodious summer-house. One of these gardens is cultivated by the elder boys, the other by the juniors. Each garden is subdivided into smaller allotments, which are assigned to their respective tenants, boys from ten to fourteen years old, who cultivate and crop them according to their own fancy, a small portion of each being devoted to flowers. The diligence and ability displayed by these youthful gardeners is really astonishing. We have inspected their crops during several past summers, and with truth can say we were highly delighted with them. The onions, lettuce, celery, carrots, potatoes, &c., were excellent, and would vie with the productions of older and more experienced cultivators. Prize gooseberries are also grown, and this year the crops of London, Companion, Gunner, Eagle, &c., wereamongst the best we have ever seen, either at Nottingham or elsewhere; in fact, these boys always endeavour to obtain, either by seeds or plants, the best varieties possible. In connexion with these gardens, and to excite emulation, a vegetable and flower-show is instituted. This is held in the school-rooms at Nottingham, and prizes are given for the best productions in vegetables, as well as for stands of pansies, verbenas, collections of annual and perennial flowers and nosegays, or *bouquets*, as they are called by some, but we fancy our readers will like the old English name best. These exhibitions of youthful skill and industry are well attended." Should any of our readers wish, we can furnish them with the rules by which these school-gardens are managed.—*Midland Florist.*

CHINESE GARDENING.

The dwarf vegetation of China is peculiar to that country. I have in my possession an oak tree two feet high bearing acorns, and its trunk bearing all the external marks of an aged tree. I have also had orange and citron trees of the same size, bearing fruit of a very fine flavour. One of these orange trees used to produce, at the same moment, incipient buds, blossoms in full flower, fruit newly set, and of full size, both in a green state and ripe. I have seen a lu-chee tree, whose natural size is that of a full-grown mulberry, dwarfed into one of three feet, its trunk having all the appearance of old timber, and the branches naturally tapered. The mode of dwarfing is simple: the branch of a full-grown tree is covered with mould, which is bound round with cloth or matting, and kept moist; the fibres soon shoot into the mould. The branch is then cut from the tree, planted in the earth, and the fibres thus become the roots, and the branch a tree, bearing blossoms and fruit. The buds at the extremity are taken off, and thus other buds and branches are formed. After a certain time syrup is applied to the stem, which attracts insects, and the bark being thus injured gives the knotted and aged appearance of old trees, pieces of bamboo being applied to give any desired form to the branches.—*Dublin University Magazine*, *Sept.*, 1848.

FORCING THE ROSE.

If Roses are required early, now begin. The properly prepared plants have grown a season in the pots. Take off some portion of the surface soil and replace it with equal parts of well rotted manure (if cow manure it is best) and loam, give them a good soaking of water and place them in the forcing-house or frame. The heat should be, for the first fortnight, about fifty-eight degrees, and then be raised to about sixty-two; kept at this temperature they will bloom admirably. The above is the heat by day, it should be about five degrees lower during night. The plants must be syringed every day, doing it early in the morning; as the days lengthen, and when fine, do it again a little while before sunset. Smoke the plants occasionally to keep down the green-fly.

ON WINDOW GREENHOUSES, AND TREE VIOLETS.

DURING the past summer I have taken many excursions around London, and have been much pleased to see the improved style of the villas, terraces, &c., which have recently been, or now are, in the course of erection. What pleased me most was to notice, in numerous instances, the invaluable appendage of a small greenhouse, elevated to be even with the general sitting-room, whether upon the first or second floor. In some cases the construction was at the side of the building, and had the end next the room of glass and the entrance to the plants there; this structure was warmed by a metal pipe, or flue, passing through it from the lower room, usually a cellar, kitchen, &c. In others, very numerous cases, a structure was made in front of the second floor windows, which are what is denominated window greenhouses. These were warmed too, I found, in many cases from the room beneath, the waste heat of a kitchen fire being employed.

This style of window gardening, &c., has been rather extensively adopted in Belgium and France for some years, and I recollect some remarks upon it in reference to Belgium being inserted some few years back in the "Gardener's Chronicle."

"In Belgium," says M. Victor Paquet, "wherever you go you see spaces between double sashed windows filled in the winter time with the most charming flowers. Elsewhere the balconies are turned into greenhouses, and you may find on even the fifth or sixth floor a miniature stove gay with the brightest flowers and the greenest foliage. In Paris there are many such contrivances, especially two on the fourth floor of a house in the Boulevard de la Madeleine. Here are to be found the rarest plants. Camellias grow in an open bed. Passion-flowers cling to the columns; the creeping Fig forms a carpet upon the walls, and Water-plants start up from tiny basins curiously contrived in the solid brick work. By turning a screw a stream of limpid water flows down a rock, from whose crevices start up Ferns and Lycopod Mosses, &c. And what is it that adjoins this little Paradise but a bed-room. The first beams of the morning sun throw upon the bed of the owner the shadows of Palm-leaves and Bananas, or of garlands of Passion-flowers."

These contrivances are worthy of a very much larger extension, and I now have hopes that in this country we shall go far beyond our continental neighbours in number and excellency of structure. I am a London amateur gardener, and along the front of my second floor sitting-room, having a south aspect, I have a glass construction four feet wide, extending three feet beyond the outside part of each of the two front windows. On each side of the window I have a stage of six shelves, and the plants upon them do not obstruct the light into the room. In front view from the room I have three rows of low plants placed. Each recess holds about one hundred plants. The usual folding windows for the room are provided, so that I can have the plants entirely excluded from the room, or the contrary, at pleasure. My erection is heated from the underground kitchen fire; a separate small flue is carried from the fire, which I can use or otherwise by means of a thick iron damper fixed in the flue. I have a covering of a thick woollen material, which is fixed to draw up under a box over the entire roof; this is drawn over in cold nights, and even without fire I find it to be a sufficient protection. The material is nearly half an inch thick.

Now this very valuable appendage affords me the felicity of having the beauties and fragrance of a number of suitable plants throughout the entire year—such as Roses, Pelargoniums, Heliotropes, Bulbous tribes, and one of my greatest favourites is the Tree Violet. I noticed in the last Number of this Magazine you made some remarks upon it, and recommended its more general cultivation; it is every way worthy. I have it in constant bloom from September to June. I train up my plants so as to form them into what are termed trees; this is readily done, by training up a single shoot to a stick, and pinching off all side shoots to the height desired. It may be done to any of the fragrant Violets with equal results. They have an interesting appearance when from one to two feet high and laden with bloom. The perpetual tree Violet is readily increased by runners from untrained plants, or by cuttings taken off at a joint.

ON CULTIVATING PLANTS IN DWELLING ROOMS, WINDOWS, &c.

BY LUCY.

In the Cabinet for last July I observed some remarks are inserted on the above-named interesting, and now very general, method of growing plants in pots. Reference is particularly made to protecting the roots from the injurious effects of hot sun and hot rooms. The means to prevent it being long ornamental wire, or wooden boxes, in which the pots being placed, the spaces between the pots to be filled up with moss. This plan I adopted, and it answered admirably. An additional attention, however, was given to have the moss moistened every evening; this tended to keep the soil in an equal degree of moisture, and the evaporation to the under side of the foliage was still further serviceable. Not having the convenience of placing a box in one of my windows, I had recourse to the following plan, which I very much approve of. I had some various-sized pots made having upright sides, no hole in the bottom, but three smallish holes in the sides, about two inches from the bottom, to let off any surplus water and to admit air. Into one of these I placed the pot in which a plant was growing, the rim of the pot resting upon the edge of the outer, or case, pot.

The plant pot tapering downwards, and hanging by its rim, left a space, widening to the bottom, between it and the outer one, and the moisture arising from the surplus water carried upwards by the air entering at the side holes tended to keep the soil cool and moist. My plants flourished surprisingly thus treated. The heat of the sun and dry winds did not in the least affect the soil in the pots. Any surplus water not required is readily emptied out of the case pot.

AUTUMN BLOOMING ROSES.

THE following were exhibited at the Horticultural Society's Rooms on October 3rd, by Messrs. Paul:—

Hybrid perpetual.—Lady Sefton, lilac-blush. Lady Alice Peel, rosy carmine. Louis Bordillon, rich deep rose. Jacques Lafitte, cherry crimson. Mrs. Elliott, light crimson and purple. Comtesse Duchatel, rosy pink. La Reine, large brilliant rosy lilac. Dr. Marx, carmine. Marquis Bucella, rich rosy-red lighter edges. William Jesse, crimson tinged with lilac. Madame Laffay, large rosy crimson. Edward Jesse, crimson, shaded with dark purple. Baronne Prevost, pale rose. Duchess of Sutherland, pale rose mottled. Lawrence de Montmorency, rosy pink tinged with lilac. Du Roi, or Crimson Perpetual.

Bourbon.—Acidalie, French white. Amarantine, purplish-rose Comte d'Eu, bright carmine. Madame Desprez, rosy lilac. Celimene, pretty blush. Armosa, bright pink. Comtesse de Seine et Marne, brilliant crimson. Queen, fawn colour. Pierre de St. Cyr, rosy lilac and crimson. Vicomte de Cassey, fine red. La Grenadier, light crimson. Duc de Chartres, rosy red. Souchet, deep crimson purple.

Tea.—Caroline, pink with deep rose centre. Comte de Paris, light crimson tinged with lilac.

China.—Mrs. Bosanquet, pretty flesh colour. Cramoise Supericure, rich scarlet and velvet crimson.

ON THE ROSE.

BY JUVENIS.

I AM desirous, this season, to plant a border with Roses, it will hold three hundred. I purpose having tall, and then dwarf standards, and the front row dwarfs of the usual kind. My soil is a gravelly loam, please inform me whether it will do, or what may I substitute as suitable.

[The soil you have is too open, and liable to be so hot in summer as to damage the roots and the plants to be killed at an early period. A strong yellow loam (not clay) from a foot to half a yard deep is desirable, and it must have a dry substratum, and have a provision for all excess of water to be drained away.

It must be well enriched with rotten manure, if of cow dung all the better. Let the border have a slight inclination from the back to the front. The sooner they are planted in November the better, as the fresh rootlets will push into the soil before winter, and bloom the more vigorously next season. They will, however, succeed if planted any time up to the end of February, after that time there is much hazard of their living. Always give a good watering at the roots at the time when planting; this sinks the soil firmly around the roots and contributes much to the plants growing.]

LEAF OR VEGETABLE MOULD.

Now is the time to provide for this very essential article in the successful cultivation of flowers. Get together all the leaves necessary for the quantity of soil desired, do not lay them more than four feet thick, and over them throw soil enough to retain them in the position laid. In this way they will not heat, but gradually moulder into a proper rich condition. The situation should be where the descending showers will fall upon the mass, as this element tends to bring the material earlier fit for use. A soaking or two of water given to the heap will also promote the object. They do not usually become properly reduced at the end of one year, but require a second, and during the one or even two years, the heap should be turned occasionally, always throwing over it after this operation a slight covering of earth to secure the leaves at the surface from blowing away. This provision for plant growing is invaluable; it supplies a food that most plants feed upon with avidity, and is promotive in a great degree to a fruitful vigour. Embrace present advantages, lose not time.

ON PRUNING ROSES.

Cultivators of Roses are greatly divided in opinion as to the best period when Roses should be pruned. Some stating it should be performed in autumn, whilst others assert it must be done when the severity of winter closes, usually at the end of February. Now both parties are right in some respects. There are Roses which should be pruned in autumn and others in the spring.

All the early blooming Roses, which usually ripen their wood well, may safely be pruned in autumn. Of this class are the Gallica, or French Roses as they are termed. In doing it to the dwarf-growing ones, every shoot should be cut down so as only to leave two or three buds. This rigorous system must regularly be pursued in after years. When the old plants have stood for four years it is best to have a supply of young ones. Plants raised from layers are better than suckers; having received a check by the operation they are more prolific in blooming, and the flowers upon sucker plants are never so fine as those the layers produce.

All the late blooming Roses should not be pruned till towards the end of February, this is necessary with the soft-wooded kinds, and when pruned they should not be cut in short as the Gallicas, such are the China and Damask Roses, along with their immense varieties. In pruning them, too, the knife must be sparingly used. Only the older brown coloured shoots should be cut out, and they wholly; thin away all extra young shoots. Also it is from the extremities of the shoots of these Roses that the flowers are produced, and which fact is a sufficient guide in the pruning process.

Climbing Roses for the most part bloom from the ends' of their shoots, it is therefore quite evident they should not be cut in, but a judicious thinning of the old shoots as well as cut away the surfaces of new ones, is requisite. A summer thinning of the new shoots is very necessary, in order that only a proper number may be retained for the following year's blooming.

Scotch and Sweet Briar Roses, with all their varieties, only require any old shoots cut away, or vigorous suckers pruned down to about four inches long. They require no more attention in pruning.

In pruning Standard Roses some attention should be paid to have the heads somewhat more natural in form, and not be of that very stiff manner often seen, [the result of shortening back to one or two buds. The method to be adopted is to allow a sufficient number of shoots to be kept longer than the rest. The former will push shoots, the ends will become somewhat pendant, whilst the others will supply the closer portion of the head and thus render it as a whole more natural and symmetrical.

LILIES.

Less attention than it deserves is paid by the amateur florist to the genus Lilium, although among its species are so many lovely flowers. All those which are half-hardy, as the Purple Lily, L. atrosanguineum, White beauteous Lily, L. speciosum album, and Spotted Lily, L. punctatum, may be grown with superior excellence in the following mode:—

Pot them in 6-inch pots early in November, drained well, and filled with one part charred turfy loam, one part leaf-mould, one part cow-dung, and one part sandy loam. Bury the bulbs only just beneath the surface, give water after two or three days, place on the front shelf of the greenhouse, and when the roots reach the bottom of the pots, remove at once to 12-inch pots to remain. When bloom-buds appear, give liquid manure once a-week, besides watering as required. Shade whilst in bloom, and, as the leaves decay, gradually reduce the application of water. In November, re-pot the bulbs, removing the offsets, in 6-inch pots as before.—*Cottage Gardener.*

[These sized pots may do for small bulbs of the Japan Lilies, but large bulbs will require pots which are at least ten inches diameter, and twelve deep.]

THE FUCHSIA.

Several years back we inserted some particulars relative to a number of Fuchsias we had planted out in the open border. From that time to the present they have continued to flourish and bloom profusely. The largest bushes are now nearly five feet high, and nearly that across, and when in full bloom with their pendant lovely gems of flowers, they are the admiration of all beholders.

The situation they occupy is a square of fifteen yards each way, divided into four beds, crossing the centre at right angles by a walk each way. The soil is a sandy loam two feet deep on a gravelly subsoil, the beds are raised from six inches at the sides to about ten inches at the middle. The situation is open to the east, but the ground inclines to the west. It is also open to the south. It is sheltered on the west and north sides. The only protection they have had has been six or eight inches thickness of dry leaves that has been laid around the plants in autumn, and a sprinkling of earth upon them to stay them where laid. For the last two winters we did not even give such protection, but left them wholly exposed. We never cut the tops off in autumn, but such as are injured in winter, we dress away when spring arrives.

The last two winters this dressing was not rendered necessary; the entire bushes withstood the frost without sustaining damage. The shoots were so well matured as to become quite woody. The Fuchsia is certainly one of the handsomest shrubs that can adorn the flower garden or shrubbery. The kinds we turned out at first have now become of an entire hardy habit, and some of them keep their foliage in full rich green vigour through winter. In very dry seasons we have given an occasional soaking of water to the roots. Our plants generally bloom for the period of six months.

ON THE CHOROZEMAS.

In the last number of the Horticultural Magazine some useful remarks are inserted on the culture of this handsome flowering genus. They embody some of the following particulars in connexion with ours:—

Two or three of the Chorozemas are of a climbing habit, but the others, species as well as hybrid varieties, are naturally of a bushy habit. By mismanagement, however, it is not uncommon to see plants with long naked stems, and a few, almost leafless, branches compose a miserable head. This defect arises from two causes; first, being grown in too high a temperature; and secondly, by neglecting to pinch off the leading shoots, to induce the production of side shoots, till a sufficiency is obtained to compose a handsome bushy plant clothed with fine foliage, and in its season bloom too from the rim of the pot to the highest shoot.

The plants ought not to be grown rapidly. Only keep them from frost and strong currents of wind, and they cannot have too much air or too much light. They delight in a compost of two parts turfy peat to one part of good pasture-loamy soil. These must not be sifted fine, but either chopped up or be rubbed by the hand through a coarse riddle. A liberal drainage of crocks, upon which a few bits of turf must be laid. At the growing season they require a good supply of soft water, and no stagnant water must be allowed, in saucers or from a deficient drainage, for in either case the death of the plant would soon ensue. Do not allow a hollow at the surface of the soil in the pot around the stem of the plant, for water in an undue quantity sinking in that particular part will soon destroy it. Care must be taken not to have the plant placed low in the pot, only so low at the sides as to give space for a sufficient supply of water to satisfy the wants of the plant. Let the centre of the ball be as high as the rim of the pot. The climbing ones require proper supports; and to prevent them becoming naked below, the side shoots must have the leads pinched off as often as necessary to furnish them entirely in every part. All the tribe are handsome, blooming profusely, and are easy of cultivation; also are readily increased by cuttings inserted in sand, or from seed. A collection of the best, if not all, ought to be in every greenhouse. They do well grown in a pit-frame, and removed into the greenhouse for blooming.

SELECT WINTER-FLOWERING IN-DOOR PLANTS.

Eranthemum pulchellum, (Justicia nervosa of some).—This is an invaluable plant for winter, it blooms from November till May in profusion; and no stove, warm room, or warm greenhouse, [should be without it. Its numerous intense blue flowers far exceed in beauty those of the new Plumbago Larpentæ. A fine bushy plant in full bloom is the admiration of all who see it. The plant is to be had at a trifling cost, is easy of cultivation, and propagates readily by cuttings.

Justicia speciosa.—This is a plant of easy culture, bears cutting in well, and readily forms a profuse blooming bush of any desired size. Its beautiful rosy-violet flowers, produced in terminal spikes so numerously, and for so long a period, have a very lively appearance. It can be procured at a low price. It does well either in a stove, warm greenhouse, or sitting-room.

Coronilla glauca.—This is a charming plant for the greenhouse or sitting-room. Its neat pinnated foliage of glaucous hue is pretty, and when its vast profusion of rich yellow pea-formed flowers in fine heads are in bloom, it is highly ornamental, and its contrast with such flowers as those above-mentioned is very striking. It blooms from October to May. It can be procured at a trifling cost.

Daphne odora.—This is a charming old inhabitant of our greenhouses, and yet but seldom seen. The reason is, its proper mode of culture is not often given it. The plant should first be grown freely to produce wood, then pinch off the leads in order to have it a bushy plant. Having accomplished this, let the plants be duly attended during summer in the greenhouse, so as to get the new wood perfectly ripened, at the end of September or in October, place them in the warmest part of the house, and they soon display their peculiar sweet rich perfumed flowers. They are not of much show, but their fragrance more than compensates. The original species has white flowers, but there are some varieties of a rose-colour, and one with red, this latter flowers more freely than the others, but is not so fragrant as the white. A single plant will fill a house or room with rich perfume. It can be had cheap.

Gesneria zebrina.—This comparatively new plant is a charming winter bloomer. Its large heads of numerous flowers are very ornamental, and the lively contrast of scarlet and yellow in the same flower is particularly pleasing and handsome. It blooms very profusely from October to May. It does well in the stove, warm greenhouse, or sitting-room. It ought to be in each. Can be had very cheap.

CORRŒA SPECIOSA.—Besides this lovely flowering species there are numerous hybrids which have been raised within the last seven years, many of them peculiarly handsome, all beautiful and interesting. The best we have seen are the following:—Atro rubens, brilliant, carnosa, delicata, excelsa, floribunda, picta-superba, rosea alba, Harrisii, Cavendishii, nobillissima, robusta, ne plus ultra, and lutea. Their beautiful tube-formed, or bell-shaped flowers, borne in profusion from October to June, and of handsomely contrasted colours in scarlet, crimson, white, rose, red, green, &c., produce a very pleasing and striking effect. Every greenhouse ought to have a select collection of them, and every sitting-room should have one or more in its collection of plants. They are sold at a cheap price.

(*To be continued.*)

ON RAISING TROPICAL SEEDS.

BY EXOTICA.

MUCH of the disappointment in raising seeds is occasioned either by the access of light, by deep covering, by too much or too little moisture, or by insufficient heat. Many plants will grow well at a temperature quite incompetent to promote and sustain the germination of their seeds; for instance, the Kidney Bean (Phaseolus) can, during a cold wet summer, only be cultivated in Britain by starting the seed in a hotbed. The well-known difficulty in causing imported Cocoa-nuts to germinate may arise from insufficient heat, or from the fruit having become dry by remaining too long on the tree. The liquid contained in the nut is indispensable in the process of germination, as the food of the embryo can only be absorbed in a liquid state. Although the Cocoa-nut is cultivated in the mountainous parts of Jamaica, where the atmospheric temperature varies from 60° to 90°, it only assumes the characteristic grandeur of Palms, and can only be propagated with certainty by the sea-side, where the heat of the soil exceeds 120°. From what has come under my own limited observation, I think it may safely be laid down as a rule in sowing tropical seeds, that, how well, soev er a plant may grow at the minimum temperature of its native locality, the maximum temperature of that spot ought to be maintained while the seeds are vegetating. The chemical effect of light, so injurious to small seeds, such as Lisianthus, Lobelia, &c., could easily be obviated by having sashes glazed with coloured glass. Larger seeds, however, that admit of being covered to the depth of half an inch, do not require such protection when sown in March. If the atmospheric temperature and humidity of the locality of every plant were better known, the proper mode of cultivating exotics would be more readily predetermined. Many individuals resident in foreign countries are deterred from collecting seeds and plants from inability to name them, while others think they have greatly enhanced their value by noting their Linnean class and order. But I presume the information most desirable to accompany a package (suppose from Jamaica), is to know whether a given plant grows by the sea-side, or towards the summit of the Blue Mountains, where the temperature varies from 40° to 75°; whether in the partial light of a deep dell, or exposed to the direct rays of the sun in the open glade; or whether an annual, a lowly shrub, or a lofty tree. Such information might be communicated by any one. The most useful and interesting part of geography is the distribution of plants, as they are dependent in a greater degree on external agents, such as heat and light, than animals.

ON FORCING ROSES AND OTHER SHRUBS.

There is a great mistake made by gardeners who force flowers, when they throw away the plants and take fresh ones for the following year. The same plants are better in most cases than new ones, for it stands to reason, that having done flowering earlier they make their growth earlier, and have a longer time to ripen than those which have not been forced. But the treatment must begin differently; the first year ought to go for nothing, the flower buds ought to be taken off instead of being allowed to open, the growth of the plants ought to be completed, and then they ought to be allowed to rest; when pruned and placed in the house again, they will open as strong as ever and flower well, and the same plants regularly bloomed, shifted, grown and rested, will always make the effort to grow earlier every year after. The habits of plants can be reversed so nearly, as to make them completely change their season. Forced flowers are generally treated ill; after they have bloomed, they are for the most part neglected, and make no growth; the instant plants are done with, which is when the bloom begins to look untidy, they should be taken the greatest care of, their pots changed if too full of roots, their growth completed in the house, if the season requires it, instead of being all huddled together and starved. The same Roses have been forced year after year for several years, in finer order every season, and there is no plant more ticklish than the Rose to force. When plants are treated regularly, grown properly, and rested well, they do not require half the heat to force them. This may be seen by experiment, for if they are removed to the greenhouse with fresh plants, they will begin to grow weeks if not months sooner than those that have never been forced; you might as well tell us that a vine wants to rest a season, as that a flower does. If our friends among the practical men would act on this plan awhile, they would soon leave off resting plants a season. Rhododendrons, Azaleas, Lilacs, and many other subjects will force quite as well as vines, and their seasons may be pretty nearly reversed by habit. A Rose-tree blooms actually better the third year it is forced than it does the second; and as they do not require such strong heat, they are not necessarily drawn, which a plant taken from the open ground, and not previously forced, always is. All that plants require is, that they shall be grown without being drawn up, and the growth completed after their flowers have decayed; yet not one gardener in fifty forces a plant the second year, when it would, if properly managed, be better than it was the first.—*Glenny's Garden Almanac.*

ON THE CULTURE OF QUEEN AND GIANT STOCKS.

BY A FLORIST.

The entire race of Stocks are plants I much admire, and there is not a kind, I believe, of these which thrive in the open air of this country but I possess. I am more especially partial to the above-named Stocks, and they very deservedly stand in high repute, producing by proper management spikes of flowers two feet long, and each separate blossom two inches in diameter. In addition to their splendour and fragrance they bloom during all the summer season, and are among the finest ornaments of the flower garden, their various colours grown in contrast producing a fine effect.

This season I have blooming plants of the following kinds:—

1. The best way of propagating is by seeds, and unless some little attention be paid to the selection of the seed double flowers will very rarely be produced. Always collect the seeds from such plants as have semi-double flowers, or which grow in the immediate neighbourhood or are surrounded by double ones; for although double ones have no power to produce seed themselves, and it has been disputed whether they can impregnate others, yet it has been always found that plants raised from seed gathered in such situations have amongst them a greater number of double ones than when the seed-bearing plants grew under different circumstances.

2. The best time for sowing is the beginning of May. This should be done on a border of light sandy soil prepared for the purpose, on an eastern or south-eastern aspect; never on a south aspect, as this would be too hot for them. Of all other modes the best is to sow the seeds in shallow drills, six inches apart, scattering the seed very thinly.

3. Water as often as they require it, but never do this in the middle of the day, when the sun is hot, for the plants would be liable to be damaged by the sun, rendering the drops of water hot, and thereby scalding the leaves, which, if it did not entirely destroy them, would greatly retard their growth. The best time is either very early in the morning, or towards five o'clock in the evening, when the sun's rays are oblique.

4. When the plants are nearly three inches high they should be thinned out to six inches apart in the rows, and afterwards to a foot, taking up every other row; and those plants taken out should be transplanted carefully into a similar border as that prepared for the seed-bed, or be planted three or four together in the flower borders; the former plan is the best, if it is convenient, because the whole are more easily protected through the severity of winter. In either case they must be taken up with balls, and be sheltered from the sun, and regularly watered, until they have begun to grow again. Those left

in the seedling bed will be much finer plants in the autumn than the transplanted ones, from the circumstance of having received no check in removing, which, from having so small a quantity of fibrous roots, prevents their growth for some time.

5. On the approach of winter the borders may either be hooped over, and be covered with mats in severe cutting weather, or a frame may be set over the plants, and the glasses put on to preserve them. If they are left entirely exposed, if the plants are not killed, the long leaves will be beat to pieces by the winds, and the naked stalks, at the approach of spring, will be very unsightly. Those planted in patches in the flower borders may be protected by branches of spruce fir, stuck into the ground round them, in the absence of other shelter.

6. In March, if the weather be fine, or if not early in April, take them up with as large balls as they can be got, and plant them in the situations intended for them in the flower borders. Early in June they will come into bloom, and will more than repay for all the care taken of them.

FUMIGATING.

BY EDWARD.

My standard Rose-trees being very much infested this year with the Green Fly and other insects, I had recourse to the following useful, and at the same time very cheap and simple, contrivance to rid myself of them. I ordered a box not unlike a watchhouse, of half-inch deal, seven feet high and four feet in diameter, of an octagon shape, with one of the sides made to open like a door, with a hole an inch in diameter three inches from the ground to admit the nose of the bellows. I then lifted it over one of my rose-trees, and placed the fumigating apparatus in the interior; after a few minutes' application at the bellows I had the pleasure of seeing those detestable pests fall to the ground. After a good syringing the trees looked as healthy and were as free from insects as I ever saw any. Of course the box may be made of any size.

ON THE TREATMENT OF BIGNONIA VENUSTA.

NEARLY seven years have elapsed since we figured this gorgeous climber in our "Mag. Bot." (vol. vii., t. 123), and there, in treating of its culture, we recommended that it should be well pruned during the period of rest. It is to be regretted that, notwithstanding the high character we then gave of it, this deserving plant is still very little grown in our stoves, and where it is found, the display of its flowers is, generally speaking, very imperfect. We are therefore induced to give a further notice on the subject, in the hopes of stimulating those who have not hitherto possessed this splendid plant, to immediately obtain it, and by pointing out to those who have it already and have flowered it very imperfectly, a few traits in its culture, by following which they will be able to render it an object of admiration.

The temperature requisite is a moist stove, where, during the growing season especially, a considerable amount of both heat and moisture can be supplied.

The soil most suitable is a mixture of turfy loam, two parts; sandy peat, half a part; and leaf mould, half a part: the latter must be well rotted, and the two former should be of a very fibrous quality, and be only roughly broken.

If the plants are to be grown in pots, large ones should be selected for the permanent flowering ones; for if the roots be at all cramped, the produce of flowers will not give satisfaction to the cultivator. Young plants will progress very rapidly in growth if they are placed in a brisk heat and shifted pretty often, to prevent the roots becoming matted; but to have this gem in the highest perfection, plant it out in a prepared border in the stove, in a situation where its roots will derive some warmth from the heating apparatus; then it will riot in luxuriance, and produce immense festoons of gorgeous flowers, the grandeur of which must be seen to be properly appreciated. Its season of flowering, too, being throughout the winter months, is another quality which renders it doubly valuable.

Water may be liberally supplied from May to the end of August, that is, during the season of growth, both over the foliage and at the roots; but this must be considerably diminished as autumn progresses, that the new wood may have an opportunity of ripening, and the syringing must be altogether dispensed with. When the plants are brought into a state of rest, very little is required even at the roots, although they will not at any time endure drought without injury. A little very thin liquid manure, administered once or twice a-week during the time the plant is in full growth, is an excellent assistant to the development of its parts.

When the growing season is quite over, that for flowering commences; this is generally about the middle of October, and usually continues until the middle of February.

As soon as the flowering season terminates, prepare the plants for wintering. If in pots, they may be placed at the cool end of the stove; but if planted out, this of course cannot be done. Now cut down the plant to about five or six feet in length, and prune off all the side shoots so as to have only one stem. This must be repeated every year, for on this in a great measure rests the success of its flowering freely. It must now be allowed to repose, only watered at the roots when the soil shows signs of dryness, and preventing the action of any other excitement until about the middle of April, when it will again show signs of growth. Then top dress, or pot if required. And when the young shoots have extended to three or four inches in length, thin them out to not more than six for training, and plant the rest as cuttings, in pots of sand, placed under a hand-glass in heat.

[The above is extracted from that excellent publication, Paxton's "Magazine of Botany." We also figured this beautiful flowering climber in a former volume. It certainly merits a place in every hothouse, conservatory, or warm greenhouse. It can be procured very cheap. Easy of culture, grows freely and blooms profusely. Its beautiful orange-nankeen flowers are borne in large clusters.]

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

THE Chrysanthemum is the most valuable plant we have for autumn decoration either for the greenhouse or the flower garden, it fills up a blank that no other plant we have could do. It supplies, too, a profusion of beauty in almost every colour. It has become a desideratum in all well managed flower gardens, having the facility, to plant a proper proportion of the most showy kinds of Chrysanthemums, which ornament it, when the season keeps open, up to December. This autumn they are injured somewhat earlier than usual. In order to have the flower garden lively as possible the succession to Chrysanthemums must be made up with evergreen shrubs; it is readily done at a trifling cost by plunging in potted plants of Lauristinus, Aucuba, myrtle-leaved, broad-leaved, and variegated Box, Hollies—gold and silver-striped, edged, &c., also the entire green-leaved, the yellow-berried, and dwarf-fruited crimson, &c., Arbutus, Rhododendron, Mahonia aquifolia, Phillyrea, Arbor vitæ, Bay, Kalmia latifolia, dwarf laurels, Daphne pontica, cedars, &c. A garden thus furnished produces a very cheering appearance, and those who have not seen one so ornamented cannot adequately conceive of its beauty and finished neatness. This attention most amply repays for the small expense, producing a lively appearance, instead of having bare beds for several months. If any Tulip bulbs be still out of ground, plant them as early as possible.

Anemones.—There are a number of very handsome single varieties of this early spring flower, and which are highly ornamental to a flower garden, whether in patches in the beds, or as an edging thereto. To bloom well next season they must be planted immediately. May be had cheap.

Gentianella.—This is a most charming spring flower, suited admirably for edging, or for patches. Its intense blue flowers in contrast with Anemones, Hepaticas, and similar early blooming ones is very striking. It, too, is a cheap plant. Attention will be necessary to protect the tender kinds of herbaceous by a layer of dry leaves, pots, boughs or branches of evergreens, &c., also the stems of tender climbing and other Roses, by tying a covering of furze over them, that, whilst it fully protects, admits sufficiency of air for the well-being of the plant.

Auriculas and Polyanthuses will require plenty of air in fine weather, and but little water. The like attention will be required to Carnations, Pinks, &c., kept in pots. Dahlia roots should be looked over, to see if any are moulding or likely to damage. Let the roots be dry before they are laid in heaps. Newly-planted shrubs should be secured, so that they are not loosened by the wind. The pots of Carnations and Picotees should be placed in a situation where they may have a free air, and be raised above the ground. If they are under a glass case it will be much better than when exposed to the wet and severity of the winter, or many will, in all probability, be destroyed. Where it is desirable to leave patches of border flowers undistributed, reduce them to a suitable size by cutting them round with a sharp spade. When it is wished to have a vigorous specimen, it is requisite to leave a portion thus undisturbed. Ten Weeks Stocks and Mignonette, in pots for blooming early next spring, to adorn a room or greenhouse, must not be over-watered, and be kept free from frost. A cool frame, well secured by soil or ashes at the sides, and plenty of mats or reeds to cover at night, will answer well. Tender evergreens, newly planted, would be benefited by a little mulch of any kind being laid over the roots. During hard frosts, if additional soil be required for flower-beds upon grass lawns, advantage should be taken to have it conveyed at the time, so that the turf may not be injured by wheeling. Pits or beds for forcing Roses, &c., should be prepared early in the month. Tan or leaves are most suitable, unless there be the advantage of hot water or steam. New-planted shrubs of the tender kinds should have their roots protected by laying some mulch, &c. Suckers of Roses, &c., should now be taken off and re-planted for making bushes, or put in nursery rows; soils for compost should now be obtained. Beds of Hyacinths, Tulips, &c., should have occasional protection. Any roots not planted may successfully be done, in dry mild weather, till February. Sweet Violets: plant these little gems as much as possible along the sides of walks, near seats, rooms, banks, under trees, &c. They are so highly fragrant as always to be acceptable, and more especially being lovely early spring flowers. Encourage all the charming spring ornaments as much as possible; Crocuses are pretty flowers, always gay in sunshine, and give a peculiar cheerfulness to every place they occupy, never be sparing in quantity of it near a dwelling-house. Do not omit the first flower that awakes thee from the repose of winter, that lovely one,

> " A flow'r that first in this sweet garden smil'd
> To virgins sacred, and the SNOWDROP styl'd."

IN THE STOVE.

Roses, Honeysuckles, Jasmines, Persian Lilacs, Azaleas, Rhododendrons, Carnations, Pinks, Primroses, Mignonette, Stocks, Aconites, Persian Irises, Crocuses, Cyclamens, Rhodoras, Cinerarias, Hyacinths, Ribeses, Sweet Violets, Heliotropes, Narcissus, Tulips, Lilies of the Valley, Correas, Deutzias, Mezereums, Hepaticas, Gardenias, Cupheas, New Blue Heliotropes, Scarlet Pelargoniums, Salvias, Chinese Primroses, &c., required to bloom from January, should be brought in early in the present month. The plants should be placed at first in the coolest part of the house; never allow them to want water. Pots or boxes containing bulbous-rooted flowering plants, as Hyacinths, Narcissus, Persian Irises, Crocuses, &c., should occasionally be introduced, so as to have a succession of bloom. Many persons who take a delight in growing some showy Hyacinths or other bulbous plants, for adorning a room or window, &c., in winter or early in spring, have been frequently disappointed by the abortiveness of some and weakness of others. This principally arises from the inability of the plant to develop itself with a rapidity equal to the quantity of moisture it imbibes, on account of its upper surface being acted upon too immediately by the atmosphere, &c.; hence arises the necessity of covering the bulb. That such is a fact is evidenced by the admirable and certain success of nearly every bulb, especially Hyacinths, that is covered with about six inches of old spent bark. This or some similar light material should always be used. Even bulbs intended to bloom in glasses we prefer starting in the cold bark, and then transferring them to the glasses when the roots are about two inches long. Where such covering is not adopted, it is of advantage to have the pots or glasses kept in a dark place till the roots are two or three inches long, and then bring them to the light. Always use water for the glasses that is just warm, cold water gives a check which greatly injures the roots and consequently the bloom. Cactus plants that have been kept out of doors, or in the greenhouse, should occasionally be brought into the stove for flowering, which gives a succession. If any of the forced plants be attacked with the green fly, a syringe with diluted tobacco-water will destroy them. If the leaves appear bit, and turn brown, (the effect of damage by red spider), a syringe of soap-suds at the under side of the leaves is effectual to destroy them. The glutinous substance remaining, not only kills those it is applied to, but prevents others returning there. The old Eranthemum pulchellum, with its fine blue flowers, Justicia speciosa, Gesneriæ zebrina, Justicia pulcherrima, and Aphellandria cristata, are fine winter ornamental blooming plants.

IN THE GREENHOUSE, &c.

As much fire as will barely keep out frost will be necessary, and for the purpose of drying up damp arising from foggy nights, or from watering. All possible air should be admitted in the day-time, but mind to keep the plants from damage by frost. The plants must no be watered overhead. Some of the Chrysanthemums that are grown in pots and taken into the greenhouse will be found to have pushed a number of suckers. If the offsets are wanted for the increase of the kind, it is advisable to pinch off the tops, so as to prevent their exhausting the plant to the weakening of the flower. If the flower-buds are thinned out freely, it conduces to the increased size of those left. If the offsets are not wanted, it is best to pull up the suckers entire. Attention will be required to watering, as the roots absorb much if given: give manure-water occasionally. If the plant is allowed to wither, it checks the flowers, whether in bud or expanded. So much do we admire this handsome genus of flowers, that we are fully persuaded their beautiful blossoms, exhibited in form and colour, will most amply repay for any labour that may be bestowed on the plants. If seed be desired, retain the blooming stems on the plants, and keep them for some time in an airy warm situation to perfect.

Dahlia seed is best retained in the heads as grown, spread singly where they will not be liable to mould, and kept in a dry but not too hot a situation; being thus kept in the chaff, the small seeds will not shrivel, but be kept plump. The roots must be dried well before being put away, or will be liable to rot.

Fuchsias and greenhouse plants, intended to be inured to the open air, will require to have protection at the roots, and probably, for the first winter, over the tops too, by furze branches, canvas, wicker baskets, &c.

If greenhouse plants require watering or syringing over the tops, let it be done on the morning of a clear day, when air can be admitted; and towards evening a gentle fire-heat should be given.

Be careful to protect beds of what are technically called "florists' flowers," should severe weather occur. Calceolarias that were cut down and re-potted last month will require attention, not to water too much, or they will damp off. Keep them in a cool situation. Whilst in a cool and moist atmosphere, the shoots will often push at the underside numerous rootlets. Where such are produced, the roots should be taken off and potted; they make fine plants for next season, and are more easily propagated now than at any other season.

PELARGONIUMS.—Plants for exhibitions should be re-potted by the middle of this month (see articles upon in former numbers); according to the size of the plants must be the pots. The smallest-sized pots in which plants are to be when shown are the 24's; they are eight inches in diameter; and the largest-sized are eleven inches in diameter. The plants need not be potted into these sizes now, but a size less, and in February be re-potted into their final pots. The plants must not be crowded together, but be kept apart.

CINERARIAS are often attacked at this season by the green fly; let the plants be placed in a hot-bed frame, and be fumigated with tobacco smoke at the first appearance of the insects.

WALKS.

Mr. MEEHAN, gardener to Colonel Harcourt, in the Isle of Wight, says that good, hard, permanent walks are made by covering them three inches thick with the following mixture. To three bushels of coal ashes, not sifted very fine, add one bushel of fine gravel. Add water to these, and mix them until they become about as soft as mortar. Spread it over the walks, the surface of which previously should be slightly broken, and raked smooth. Make the mortar-like mixture even by spreading it with a piece of board. It will become hard in a few days.—*Gardener's Chronicle.*

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